MITSUBISHI
THE BIG SCREEN COMPANY™
Digital

Owner's Guide

Projection Television Models

WS-48513, WS-48613, WS-55513, WS-55613, WS-55813,
WS-65513, WS-65613, WS-65713, WS-65813, WS-73513, WS-73713

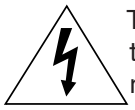
visit our website at

www.mitsubishi-tv.com

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the user of the presence of uninsulated “dangerous voltage” within the product’s enclosure that may be sufficient magnitude to constitute a risk of electric shock.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Warning: To avoid permanently imprinting a fixed image onto your TV screen, please do not display the same stationary images on the screen for more than 15% of your total TV viewing in one week. Examples of stationary images are letterbox top/bottom bars from DVD disc or other video sources, side bars when showing standard TV pictures on widescreen TVs, stock market reports, video game patterns, black or bright Closed Caption backgrounds, station logos, web sites or stationary computer images. Such patterns can unevenly age the picture tubes causing permanent damage to the TV. Please see pages 14 and 72 for a detailed explanation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

CAUTION: To assure continued FCC compliance, the user must use a shielded video interface cable with bonded ferrite cores at both ends, when using the VGA or DVI input.

Changes or modifications not expressly approved by Mitsubishi could void the user’s authority to operate this equipment.

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

NOTE TO CATV SYSTEM INSTALLER: THIS REMINDER IS PROVIDED TO CALL THE CATV SYSTEM INSTALLER’S ATTENTION TO ARTICLE 820-40 OF THE NEC THAT PROVIDES GUIDELINES FOR THE PROPER GROUNDING AND, IN PARTICULAR, SPECIFIES THAT THE CABLE GROUND SHALL BE CONNECTED TO THE GROUNDING SYSTEM OF THE BUILDING, AS CLOSE TO THE POINT OF CABLE ENTRY AS PRACTICAL.

This TV is very heavy! Exercise extreme care when moving TV as foreign material may become embedded in the castor wheels which could damage wood or other delicate flooring.

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IMPORTANT SAFEGUARDS

Please read the following safeguards for your TV and retain for future reference. Always follow all warnings and instructions marked on the television.

1. **Read, Retain and Follow All Instructions**
   Read all safety and operating instructions before operating the TV. Retain the safety and operating instructions for future reference. Follow all operating and use instructions.

2. **Heed Warnings**
   Adhere to all warnings on the appliance and in the operating instructions.

3. **Cleaning**
   Unplug the TV from the wall outlet before cleaning. Do not use liquid, abrasive, or aerosol cleaners. Cleaners can permanently damage the cabinet and screen. Use a lightly dampened cloth for cleaning.

4. **Attachments and Equipment**
   Never add any attachments and/or equipment without approval of the manufacturer as such additions may result in the risk of fire, electric shock or other personal injury.

5. **Water and Moisture**
   Do not use the TV where contact with or immersion in water is possible. Do not use near bath tubs, wash bowls, kitchen sinks, laundry tubs, swimming pools, etc.

6. **Accessories**

   Do not place the TV on an unstable cart, stand, tripod, or table. The TV may fall, causing serious injury to a child or adult and serious damage to the TV. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer, or sold with the TV. Any mounting of the TV should follow the manufacturer's instructions, and should use mounting accessories recommended by the manufacturer.

   An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

7. **Ventilation**
   Slots and openings in the cabinet are provided for ventilation and to ensure reliable operation of the TV and to protect it from overheating. Do not block these openings or allow them to be obstructed by placing the TV on a bed, sofa, rug, or other similar surface. Nor should it be placed over a radiator or heat register. If the TV is to be placed in a rack or bookcase, ensure that there is adequate ventilation and that the manufacturer's instructions have been adhered to.

8. **Power Source**
   This TV should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supplied to your home, consult your appliance dealer or local power company.

9. **Grounding or Polarization**
   This TV is equipped with a polarized alternating current line plug having one blade wider than the other. This plug will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug.

10. **Power-Cord Protection**
    Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the TV.

11. **Lightning**
    For added protection for this TV during a lightning storm, or when it is left unattended and unused for long period of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the TV due to lightning and power-line surges.

IMPORTANT SAFEGUARDS, cont'd.

12. Power Lines

An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits as contact with them might be fatal.

13. Overloading

Do not overload wall outlets and extension cords as this can result in a risk of fire or electric shock.

14. Object and Liquid Entry

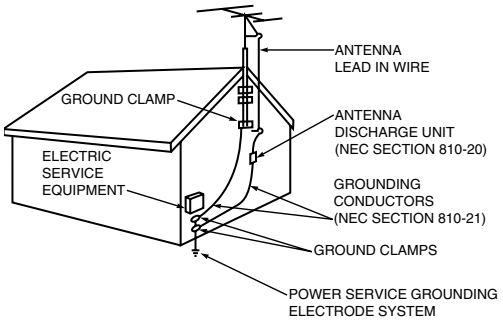
Never push objects of any kind into this TV through openings as they may touch dangerous voltage points or short-out parts that could result in fire or electric shock. Never spill liquid of any kind on or into the TV.

15. Outdoor Antenna Grounding

If an outside antenna or cable system is connected to the TV, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges.

Section 810 of the National Electric Code, ANSI/NFPA No. 70-1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

EXAMPLE OF ANTENNA GROUNDING


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
NEC — NATIONAL ELECTRICAL CODE

16. Servicing

Do not attempt to service this TV yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

17. Damage Requiring Service

Unplug the TV from the wall outlet and refer servicing to qualified service personnel under the following conditions:

(a) When the power-supply cord or plug is damaged.
(b) If liquid has been spilled, or objects have fallen into the TV.
(c) If the TV has been exposed to rain or water.
(d) If the TV does not operate normally by following the operating instructions, adjust only those controls that are covered by the operating instructions as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the TV to its normal operation.
(e) If the TV has been dropped or the cabinet has been damaged.
(f) When the TV exhibits a distinct change in performance - this indicates a need for service.

18. Replacement Parts

When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock or other hazards.

19. Safety Check

Upon completion of any service or repair to the TV, ask the service technician to perform safety checks to determine that the TV is in safe operating condition.

20. Heat

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Chapter . . . 1

Television Overview

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Our Thanks...

Thank you for choosing Mitsubishi as your premier Home Entertainment provider.

This Owner's Guide describes the features and functions of your Mitsubishi widescreen, high definition TV. We urge you to examine this Owner's Guide to become familiar with the innovative features and operations this unique television offers.

The very core of our corporate philosophy is to provide our customers with the very best. Our development team at Mitsubishi has worked to provide you with a television that defines "state-of-the-art," with the capability to meet your needs now and in the future.

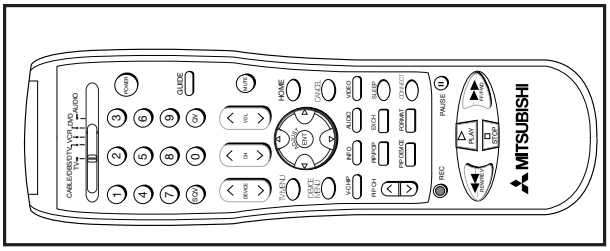
Whether this is your first Mitsubishi electronic product, or an addition to your Mitsubishi collection, we believe you and your family will continue to enjoy your Mitsubishi home theater for many years.

Thank you,

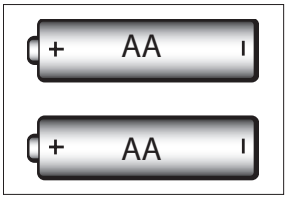
Mitsubishi Digital Electronics America, Inc.

Unpacking Your New TV

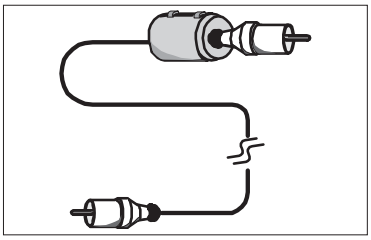
Please take a moment to review the following list of items to ensure that you have received everything including:



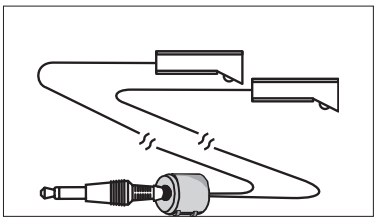
1. Remote Control



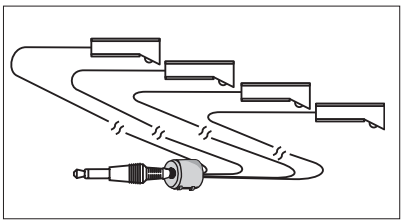
2. (Two) AA Batteries



3. (One) Digital Audio Cable



4. (One) Double IR Emitter Cable



5. (One) Quadruple IR Emitter Cable

6. Product Registration Card (not pictured)

7. Owner's Guide (not pictured)

8. Quick Reference Card (not pictured)

Special Features

Your new High Definition bigscreen television has many special features that make it the perfect center of your home entertainment system. These special features include:

Fully Integrated HDTV

Your Mitsubishi bigscreen TV can receive all approved terrestrial broadcast digital signals, non-scrambled digital cable signals, terrestrial analog signals and non-scrambled analog cable signals that use a standard offset carrier system. Further, your TV will display all High Definition signals as 1080i True HDTV™ and all standard definition signals will be displayed as 480p.

NetCommand® Home Network Control System

Your Mitsubishi bigscreen HDTV offers a new level of networking to combine selected older products with new and future digital products. NetCommand supports IEEE 1394 connections, HAVi (Home Audio Video Interoperability) Control system, Audio Video Control system (AV/C), 5C copy protection and IR control of selected older products such as VCRs, DVD players, cable boxes or satellite receivers. NetCommand includes the ability to learn remote control signals directly from many devices, allowing you to customize the NetCommand system in a way that works best for your viewing.

Wide Screen Picture Format

Enjoy a full theatrical experience in the comfort of your home. View pictures as film directors intended them. Both digital TV broadcasts and DVDs support the widescreen format well-suited for your new TV.

PIP/POP Viewing Option

Using Picture-in-Picture and Picture-outside-Picture will give you exciting options for viewing your favorite programs.

V-Chip Technology

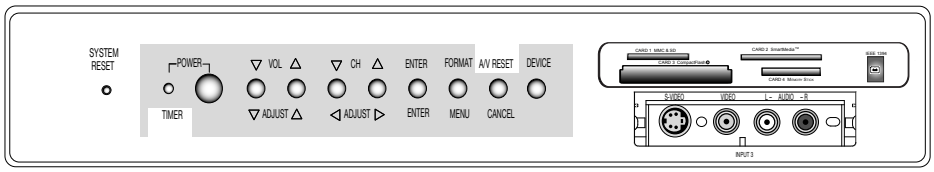
Your Mitsubishi bigscreen will allow you to restrict viewing of programming by general content, category contents, or even by time.

Memory Card

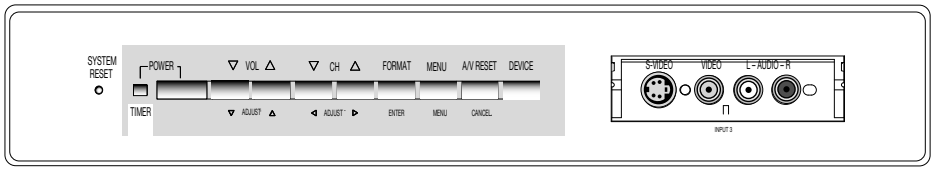
You can display a slideshow of your favorite JPEG pictures or listen to Audio selections that have been recorded on compatible Memory Cards.

Front Control Panel

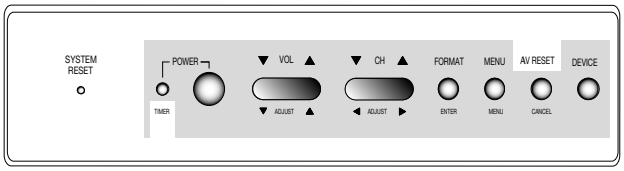
Control Buttons



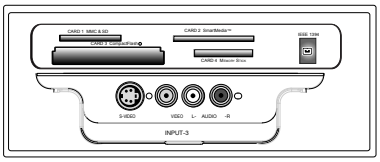
Front Panel WS-65713, WS-73513, WS-73713 Memory cards in the front panel



Front Panel WS-48513, WS-48613, WS-55513, WS-55613, WS-65513, WS-65613 see below for Memory Card location

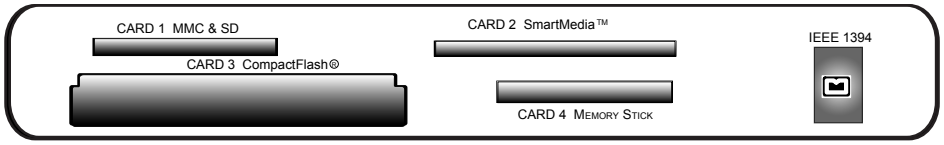


Front Panel WS-55813, WS-65813

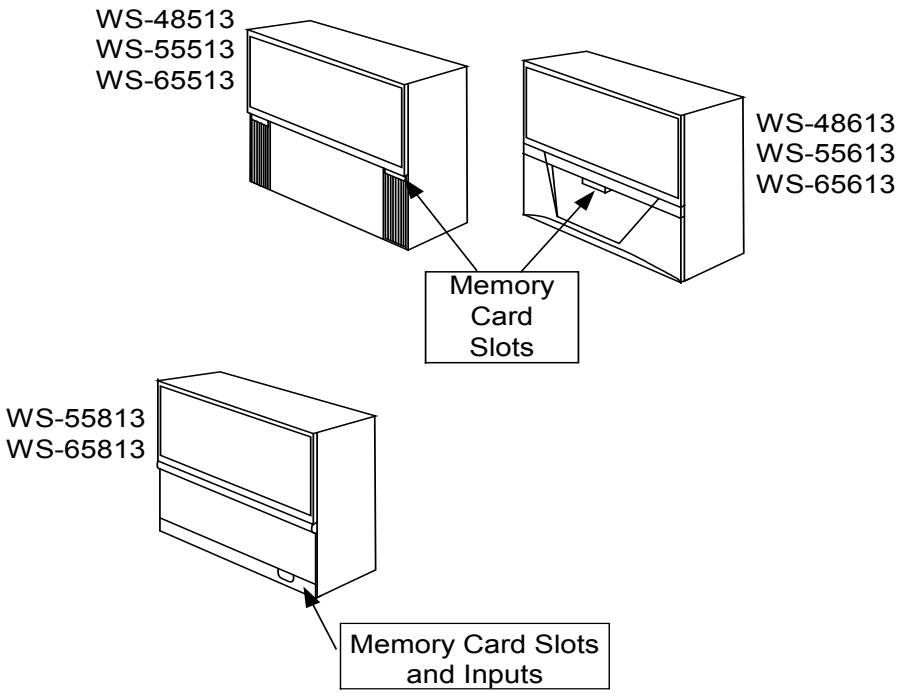


see below for location

Memory Card Slots and locations



Memory Cards Slots (1-4) and IEEE 1394 Input/Output



Front Control Panel

The buttons (previous page) on the Front Control Panel highlighted in gray are duplicated on the remote control. The top row of labels show the control functions when there are no TV menus displayed on the screen. The bottom row of labels show the control functions when the TV menus are displayed on the screen or when a special function has been activated. See Remote Control Overview page 28, for further details on the functions of these buttons.

System Reset

If the TV will not respond to either the remote control or the front panel controls and will not power off, press the SYSTEM RESET button with a pointed item like the end point of a paperclip. The TV will turn Off and the TIMER light will flash quickly for about one minute. When the TIMER light stops flashing, you may turn on the TV again. The changes you made while the TV was On before you used the SYSTEM RESET button may be lost, however, the changes you made previously are not lost.

Power/Timer Indicator

The green light is a multi-function indicator. Each time the TV is plugged into the wall electrical outlet, when power is restored after a power failure, after powering On from the Low Energy Mode, or using the SYSTEM RESET button, this light will flash rapidly for about one minute. Do not attempt to turn on the TV during this period. Wait for the flashing to stop before attempting to turn the TV on. While the TV is powered on, the light illuminates steadily. If the TV has been programmed to turn on automatically using the Timer feature, this light will flash slowly while the TV is powered off.

A/V Reset

Press this button to reset all A/V memories to the factory default settings.

Input 3

This input can be used for convenient connection of a camcorder or other video device to the TV. If you connect to the S-VIDEO terminal, the VIDEO terminal is deactivated. The VIDEO terminal is active when there is no S-Video connection.

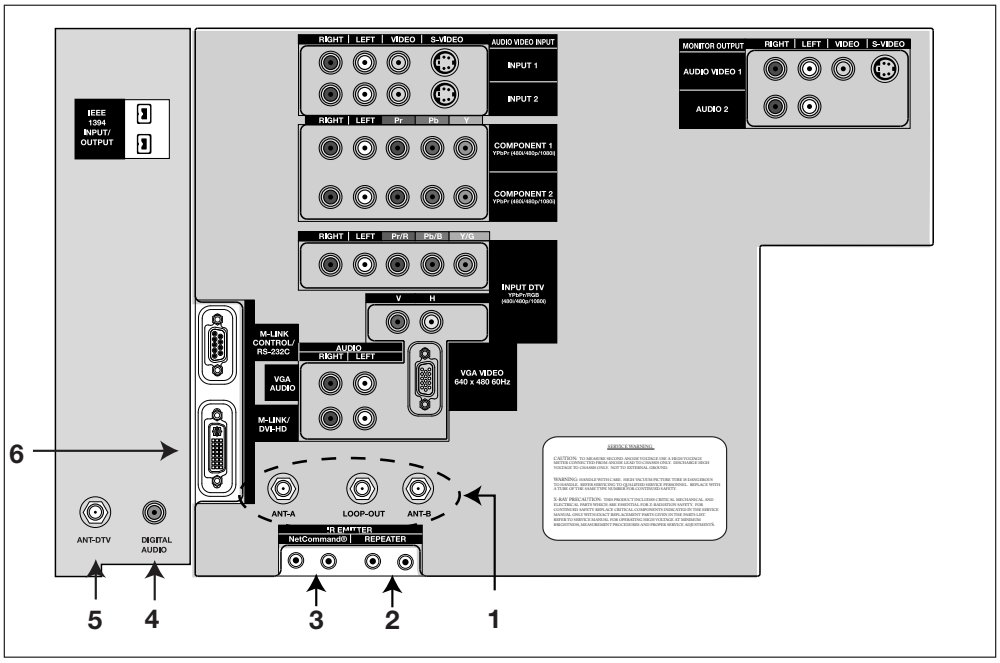
Memory Card Slots (1-4) and IEEE 1394 Input/Output

There are four card slots behind the front panel of the TV that allow the playback of JPEG pictures from many digital cameras, MP3 or WMA audio files recorded from computers or other digital recording devices.

The card slots are designed for specific types of cards and other cards or objects should not be inserted into the slots as this may damage the TV. CARD 1 slot is for both MultiMediaCard™ (MMC) and Secure Digital (SD) cards. CARD 2 slot is for SmartMedia™ cards. CARD 3 slot is for CompactFlash® cards and CARD 4 is compatible with MEMORYSTICK™ cards. See Memory Card (slideshow, playlist) setup, page 77 for details about JPEG, MP3 and WMA7 file types that are compatible with the TV.

The IEEE 1394 input/output allows for temporaryconnection of IEEE 1394 devices such as some camcorders, to the front of the TV. This connection works the same way as the two rear IEEE 1394 connections.

Back Panel



1. Antenna (ANT-A, LOOP OUT, and ANT-B)

ANT-A and ANT-B receive analog NTSC signals from VHF/UHF antennas or an analog NTSC cable system. LOOP OUT sends the ANT-A signal out to another component, such as a cable box or VCR.

2. IR Emitter-Repeater

Two jacks are provided for connecting IR emitters. Connecting IR emitters here allows the TV to pass IR commands from most IR remote controls to other A/V devices that are out of range of the remote control.

3. IR Output-NetCommand®

Two jacks are provided for connecting IR emitters. IR Emitters connected to these jacks are used by the NetCommand system of the TV to control external analog devices such as VCRs, DVDs, cable boxes satellite receivers and audio receivers.

4. Digital Audio Output

This output provides Dolby Digital audio, received in the signal from the ANT-DTV input and IEEE-1394 devices. This output is intended to be connected to an external audio receiver that is capable of decoding the digital stream and converting it to analog signals suitable for driving loudspeakers.

This output does not send a signal while analog devices connected to other inputs are being used, when MP3 or WMA cards are being played, or when MPEG audio signals are being received. These audio signals are decoded by the TV internally and are output as analog left and right audio to TV speakers and Monitor Output.

5. Antenna DTV (ANT-DTV)

This input receives digital TV signals from a VHF/UHF antenna or unscrambled digital cable system. If the TV receives scrambled cable signals on this input, it will not be able to decode them. In this case, your cable company must provide a decoding box.

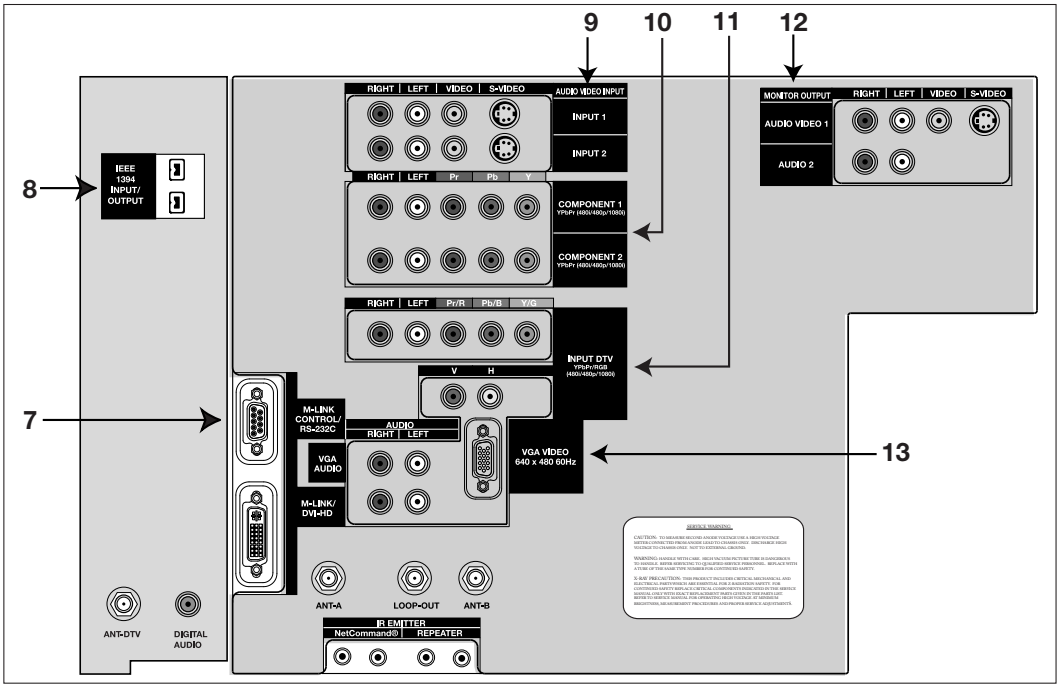
6. M-LINK (MonitorLink™) /DVI-HD

MonitorLink when used with MonitorLink Control is a Mitsubishi exclusive proprietary digital interface for the display of high quality digital video signals from a Mitsubishi HD Receiver/Controller, such as the HD-5000.

The MonitorLink input can also be used as a DVI input from other sources. The left and right audio allow the external Mitsubishi HDTV Receiver/Controller or DVI set-top box to provide audio to the TV to be able to use the TV speakers. When MonitorLink is used as DVI, it is HDCP compatible.

> **NOTE:** When MonitorLink is used as as DVI-HD input, the terminal is compliant with EIA-861 standards for extended and high definition video, however, this input is not intended for use with personal computers or devices outputting video signals with computer resolution.

Back Panel



7. MonitorLink™/RS-232C Control

A digital control interface that works in conjunction with MonitorLink. While MonitorLink provides the digital video signal, MonitorLink Control provides enhanced functioning such as automatic power ON/OFF and input selection. If you are not connecting a Mitsubishi HDTV Receiver/Controller with MonitorLink features, MonitorLink Control can be used as an RS-232C control signal input port with an external control system. Please visit www.mistubishi-tv.com for RS-232 command protocol.

8. IEEE-1394 Input/Output

These jacks allow the TV to connect to external digital products by means of a single cable. Three jacks (one on the front panel and two on the back) are provided for this purpose, which allow for a high degree of flexibility for connecting your system together. Please refer to NetCommand, later in this book for IEEE-1394 device connection details.

9. Inputs 1-2

These inputs can be used for the connection of a VCR, Super VHS (S-VHS) VCR, DVD player, standard satellite receiver or other A/V device to the TV. Please note that if you connect to the S-VIDEO terminal, the VIDEO terminal is deactivated. The VIDEO terminal is active when there is no S-Video connection.

10. Component Inputs 1-2 YPbPr(480i/480p/1080i)

These inputs can be used for the connection of A/V equipment with component video outputs, such as a DVD player or external HDTV receiver. Please see Appendix B for signal compatibility.

11. Input DTV (480i/480p/1080i)

This input is used to connect an external DTV receiver, and can be configured for YPrPb and RGB plus H&V signal types. Please see Appendix B for signal compatibility.

12. Monitor Output (Audio Video 1, Audio 2)

The Monitor Output sends the TV audio and video signals from Ant-A, Ant-B or Inputs 1-3 to an A/V Receiver or other analog A/V equipment. Ant-DTV and IEEE 1394 sources will be provided as down converted analog signals to the Monitor Output jacks.

There will be no video signals from digital products if the original signals are copy protected. No video signals are provided from VGA, Component 1 and 2, MonitorLink or Input-DTV.

For recording with a VCR, use Audio Video 1. When connecting to an A/V Receiver, use Audio 2. If using the A/V Receiver with NetCommand, the Audio 2 output will always be Main, not PIP. If using an A/V Receiver without NetCommand and Audio 2 is set for PIP audio then the PIP's or POP's audio signal is sent to an amplifier or wireless headphones. If no PIP or POP is displayed, the output will not send audio.

13. VGA Video and VGA Audio

This input can be used for the connection of a computer. Please see Appendix B for signal compatibility.

IMPORTANT NOTES

Warning: Do not leave stationary PIP/POP, or letterbox images on the screen for extended periods of time. Mix the types of pictures shown. Uneven picture tube aging is NOT covered by your warranty.

The normal use of a TV should include a mixture of TV picture types. The most frequently used picture types should fill the screen with constantly moving images rather than stationary images or patterns. Displaying the same stationary patterns over extended periods of time or displaying the same stationary pattern frequently can leave subtle but permanent ghost images. To avoid this, mix your viewing patterns. Reducing the initial contrast level can help slow the aging process. Do not show the same stationary image for more than 15% of your total TV viewing in any given week. Display constantly moving and changing images that fill the screen whenever possible.

This projection TV uses picture tubes to project the image to the screen. All picture tubes age with use. As they age, their light output is gradually reduced. Normal TV pictures fill the screen with constantly changing images. Under these conditions, picture tubes age at an even rate across the entire screen. This maintains a TV picture that is evenly bright over the whole screen. Stationary images or images that only partially fill the screen (leaving black or colored bars to fill the screen), when used over extended periods of time or when viewed repeatedly, can cause uneven aging of the phosphors and leave subtle ghosts from the stationary images in the picture.

Still or stationary images may be received from broadcasters, cable channels, satellite channels, DVD discs, video tapes, laser discs, on-line services, web/ Internet searching devices, video games, and digital TV tuner/converter boxes.

When using a computer or similar device through a VGA input, be sure to turn on the Screen Saver feature and set the activation time to 5 minutes or less. If your computer program allows, you should also set your toolbars to the hidden mode.

Examples of these types of images can be, but are not limited to the following:

- **Letterbox top/bottom black bars**:
shown at the top and bottom of the TV screen when you watch a widescreen (16:9) movie on a standard (4:3) TV.

- **Side bar images:**
solid bars shown on each side of an image when watching a standard (4:3) program on a widescreen (16:9) TV.

- **News and stock-market report bars:**
ticker running at the bottom of the TV screen.

- **Shopping channel logos & pricing displays:**
bright graphics that are shown constantly or repeatedly in the same location.

- **Video game patterns and scoreboards**

- **Bright station logos:**
moving or low-contrast graphics are less likely to cause uneven aging of the picture tubes.

- **Online (Internet) websites:**
or any other stationary or repetitive computer style images, including digital photos.

- **Closed Captioning**
Mitsubishi recommends using a gray background rather than black or a bright color if you frequently use closed captioning.

Chapter . . . 2

Connecting

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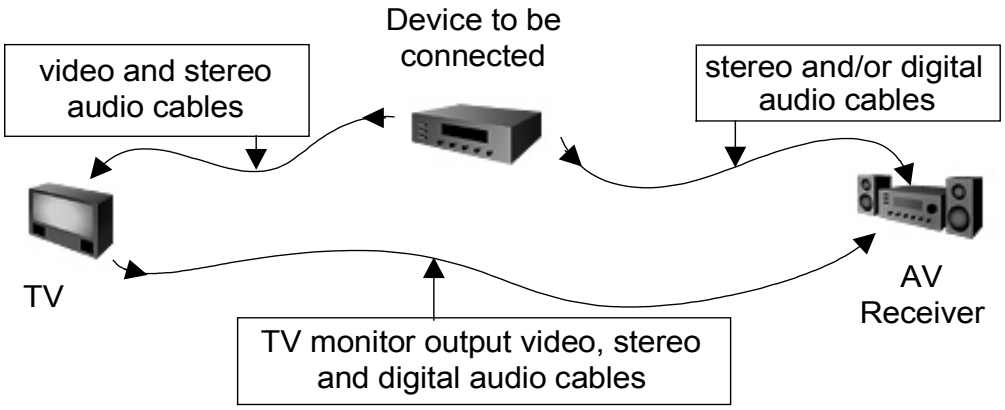
Connecting External Devices & NetCommand® Setup

NetCommand is able to control many current audio and video devices by sending remote control signals from the TV to each device. NetCommand is also able to learn the remote control signals used by most audio video devices not already in the TV's memory. NetCommand will also automatically switch the TV and compatible or learned Audio/Video (A/V) Receivers to the correct input used with each device. It is important that the inputs on the TV and A/V Receiver match the NetCommand Setup.

To simplify the installation of NetCommand, there is a step-by-step on-screen NetCommand Setup procedure. This procedure details the type and brands of devices you are connecting to the TV. The NetCommand Setup also assigns preset TV and A/V Receiver inputs for each device. You should connect each device to the TV input (both audio and video) and to the A/V Receiver (audio) as shown in the figure below.


Device to be connected
video and stereo audio cables
stereo and/or digital audio cables
TV
AV Receiver
TV monitor output video, stereo and digital audio cables

The following charts show which preset inputs you should use on the TV and A/V Receiver. Chart 1 shows TV inputs. Chart 2 shows the A/V Receiver inputs used by A/V Receiver models already known by NetCommand.

Device Audio and Video Outputs to TV Inputs	
Antenna/Cable (analog)	Ant-A
Antenna/Cable (digital)	Ant-DTV
Cable box	Ant-B
VCR	Input-1
Satellite Receiver (DBS)	Input-2
Camcorder	Input-3
DVD Player	Component-1

Chart 1.

	Mitsubishi 1	Mitsubishi 2	Bose	Denon	Integra	Kenwood	Marantz	Pioneer 1	Pioneer 2	Rotel	Sony	Yamaha 1	Yamaha 2
	Model M-VR800 & M-VR1000	Model M-VR900 & M-VR700	Model Lifestyle® 28	Model AVR-2700	Model DTR-9.1	Model VR-2080	Model SR8200	Model VSX-D557	Model VSX-49TX	Model RSX-1065	Model STR-DE825	Model RV-X2095	Model RX-V2200
Device Audio Output to AV Receiver Inputs by Name													
VCR	VCR 1	VCR	VCR	VCR-1	Video 1	Video 1	VCR1	VCR/Tape	VCR 1/DVR	Video 2	Video 1	VCR 1	VCR 1
Satellite Receiver	Aux	Cable/DBS	AUX	CD	Video 3	Video 3	DSS	CD	SAT	Video 4	TV/DBS	TV/DBS	D-TV/LD
DVD Player	DVD	DVD	(built-in)	DVDVDP	DVD	Video 4	DVD	LD/SAT	DVD/LD	Video 5	TAPE/MD	CD	DVD
TV Monitor Output (& Digital Audio)	TV	TV	TV	TV/DBS	Video 4	Video 4	TV	DVD/TV	TV	Video 1	DVD/LD	DVD/LD	CBL/SAT

Chart 2.

After using NetCommand Setup, you may go to Edit NetCommand at any time to change the inputs you used for connecting each device, custom name devices, add devices not included in the presets above or delete devices no longer used. See Editing NetCommand Setup later in this chapter. See Connection Helpful Hints, inside back cover, for additional information.

NetCommand® Pre-Memorized Devices

Below is a list of several manufacturers devices tested and shown to be compatible with the NetCommand control system. When you use these devices you will be able to control them without changing the setting of the remote control from TV to another product.

NetCommand may be able to operate additional models since many manufacturers use the same control signals to operate some or all of the models they offer. This chart lists only the models that have been tested with NetCommand. For each manufacturer, models other than those specified above may be compatible.

If the manufacturer of the device you own is not listed below or if your device does not operate using the same remote control as the models listed below, you should use the learning feature to add your device to the NetCommand memory.

NetCommand Pre-Memorized Devices

Brand	AV Receiver	Cable Box	DBS Satellite Receiver	DVD Player	VCR
Mitsubishi	M-VR800, M-VR900		SR-HD5	DD-6000, DD-8020	HS-U795, HS-U778
Bose	Lifestyle® 28			Lifestyle® 28	
Denon	AVR-2700				
Echostar			6000		
Funai					F260LA
General Instruments		CFT2200			
Hitachi				DV-P415U	VT-FX665A
Hughes			HIRD-E45, HIRD-E86		
Integra	DTR-9.1			DPS-9.1	
Jerrold		Different Models			
JVC				XV-S65GD	HR-VP 650U
Kenwood	VR2080				
Marantz	SR8200				
Microsoft				XBox™*	
Motorola		Different Models			
Panasonic			TU-HDS20	DVD-A310	PV-8662
Philips					VR620CAT
Pioneer	VSX-D557, VSX-49TX			DV-414	
RCA			DRD480RE, DTC-100		
Rotel	RSX-1065				
Scientific Atalanta		8600			
Sharp					VC-H810U
Sony	STR-DE825		SAT-A55	DVP-S500D,PlayStation® 2**	SLV-778HF
Toshiba			DTS-3000	SD-9200, SD-5109	W-717
Yamaha	RX-V2095, RX-V2200			DVD-S520, DVD-C996	
Zenith			DTV1080		

* XBox™ requires the DVD kit from Microsoft

** Playstation® 2 requires the DVD Remote Controller kit from Sony; DVD Player software disc version 2.10

The remote control signals of most audio video devices can be learned by NetCommand. However, there will be some types of signals that cannot be learned.

For devices not listed in the table above, you can use the learning feature by selecting “Other” at the [Device] screen. The procedure for this is outlined in the Edit NetCommand section of this book, Chapter 3.

NOTE: There are many different types of remotes and some of them may not be compatible with the learning feature. Bright light near the TV screen can also adversely affect the learning feature. If it is not possible to learn a device, you will need to use the original remote control of the device, or program the TV remote to operate these devices in the traditional manner.

Connecting Antenna or Wall Outlet Cable for Digital Broadcasts

Antenna or Wall Outlet Cable for Digital Broadcasts

Figure 1

For cable or antenna with coaxial lead

Connect the incoming cable to ANT-DTV on the TV back panel.

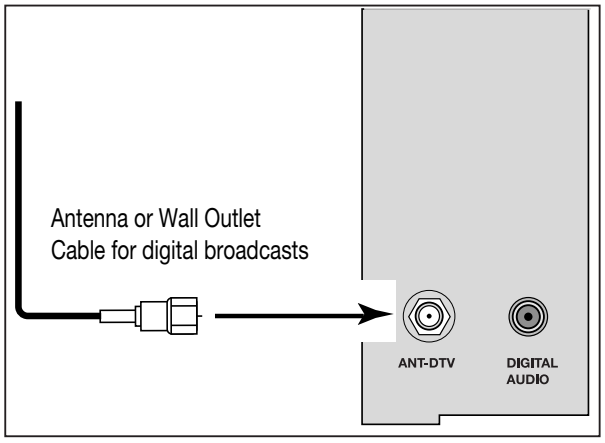


Figure 1. Antenna or Wall Outlet Cable for digital broadcasts

Mitsubishi strongly recommends against using antennas with twin flat leads. Twin flat lead antenna wires are subject to interference which may adversely affect the performance of the TV. We recommend using coaxial antenna cable.

IMPORTANT

Additional connection cables are not provided with the TV. They are available at most electronic stores.

Connecting Separate UHF and VHF Antennas for Analog Broadcasts

Separate UHF and VHF Antennas

Figure 2

1. Connect the UHF and VHF antenna leads to the UHF/ VHF combiner.

2. Push the combiner onto ANT-A on the TV back panel.

   Note: UHF/VHF combiners are not provided with the TV. They should be available at most electronic stores.

Mitsubishi strongly recommends against using antennas with twin flat leads. Twin flat lead antenna wires are subject to interference which may adversely affect the performance of the TV. We recommend using coaxial antenna cable.

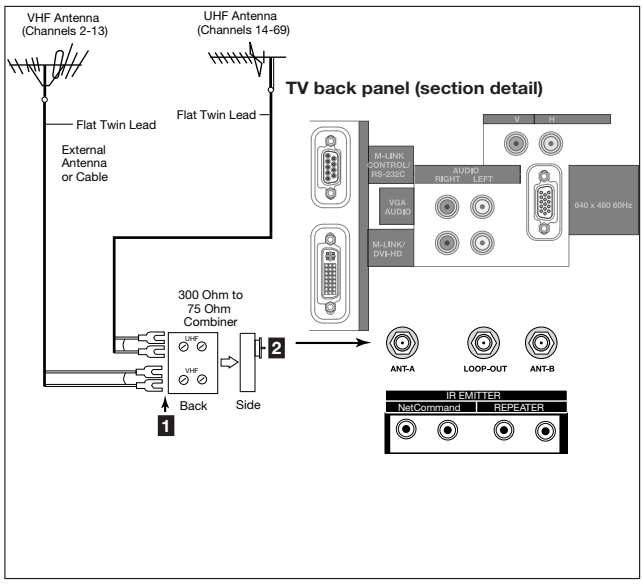


Figure 2. Connecting separate UHF and VHF Antennas

Connecting a Single Analog Antenna, Wall Outlet Cable

Single Antenna or Wall Outlet Cable for Analog Broadcasts

Figure 3

For antennas with twin flat lead

1. For antenna with twin flat leads, connect the 300-Ohm twin leads to the 300-Ohm to 75-Ohm transformer.

2. Push the 75-Ohm side of the transformer onto ANT-A on the TV back panel.

Note: 300-Ohm to 75-Ohm matching transformers are not provided with the TV. They should be available at most electronic stores.

For cable or antenna with coaxial lead

3. Connect the incoming cable to ANT-A on the TV back panel.

Mitsubishi strongly recommends against using antennas with twin flat leads. Twin flat lead antenna wires are subject to interference which may adversely affect the performance of the TV. We recommend using coaxial antenna cable.

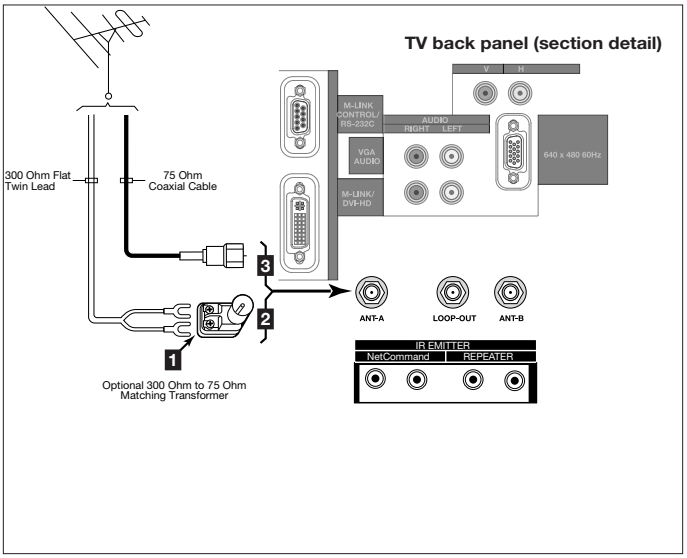


Figure 3. Connecting Antenna or Wall Outlet Cable for Analog Broadcasts

IMPORTANT

Additional connection cables are not provided with the TV. They are available at most electronic stores.

Connecting a Cable Box

Cable Box

Figure 4

1. Connect the incoming cable to ANT-A on the TV back panel.

Note: Connect two coaxial cables as follows:

2. One from LOOP-OUT on the TV back panel to IN on the cable box back panel.

3. One from OUT on the cable box back panel to ANT-B on the TV back panel.

Note: Net Command® assumes that your Cable Box is connected to Ant-B and your VCR. Also, Channel 3 is the default output channel for the Cable Box. If either the connections or output channel are different, use the Change option of Edit NetCommand to apply the changes.

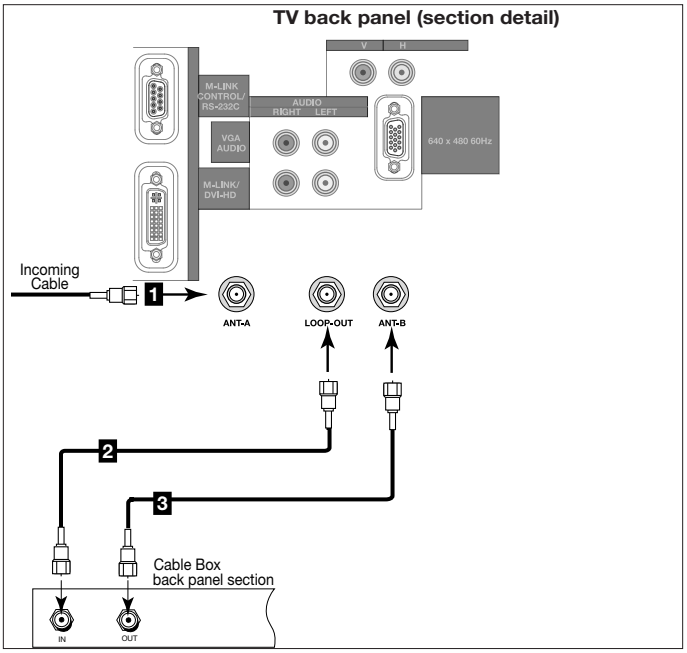


Figure 4. Connecting a Cable Box

Connecting an Analog VCR

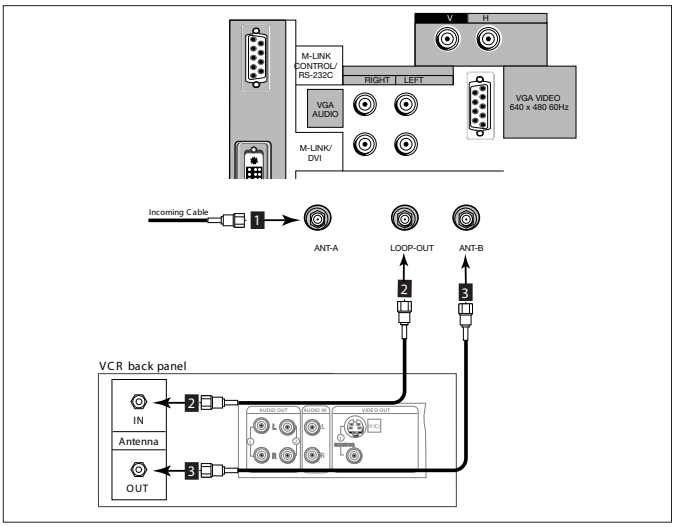


Figure 5. Connecting a VCR to Analog Antennas or Wall Outlet Cable

VCR to Analog Antennas or Wall Outlet Cable

Figure 5

1. Connect the incoming cable to ANT-A on the TV back panel.

Connect two coaxial cables as follows

2. One from LOOP-OUT on the TV back panel to ANTENNA IN on the VCR back panel.

3. One from VCR back panel ANTENNA OUT to ANT-B on the TV back panel.

4. Now complete *Connecting Composite Video or S-Video and Audio Connections*, step 1 and 2 on the following page.

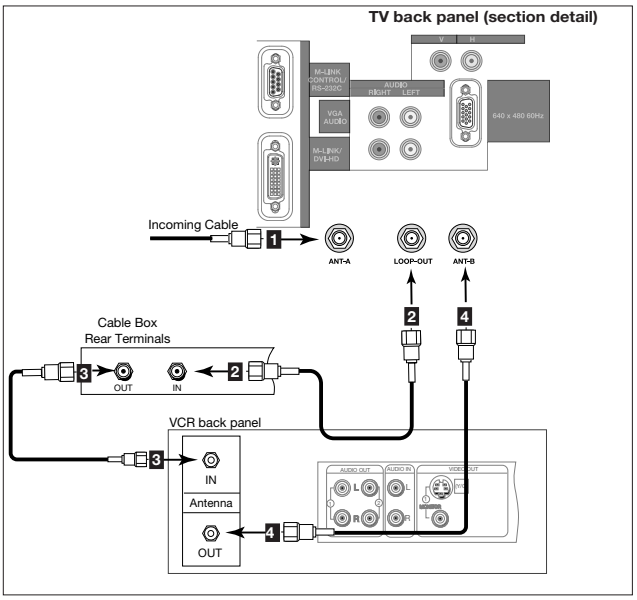


Figure 6. Connecting a VCR to a Cable Box

VCR to a Cable Box

Figure 6

1. Connect the incoming cable to ANT-A on the TV back panel.

Note: Connect three coaxial cables as follows:

2. One from LOOP-OUT on the TV back panel to IN on the back of the cable box.

3. One from OUT on the back of the cable box to ANTENNA IN on the VCR back panel.

4. One from ANTENNA OUT on the VCR back panel to ANT-B on the TV back panel.

5. Now complete *Connecting Composite Video or S-Video and Audio Connections*, step 1 and 2 on the following page.

Note: NetCommand® assumes your VCR will be connected to inputs as shown on the next page. If you use any other inputs for your VCR or add a second VCR this change must match in the NetCommand system. See “Editing NetCommand Setup” in Chapter 3 for more information.

Connecting an Analog VCR, continued

Composite Video or S-Video and Audio Connections

Figure 7

1. Connect a video cable from VIDEO OUT on the VCR back panel to VIDEO INPUT 1 on the TV back panel.

Note: If you have an S-VHS VCR, follow the same steps using the S-Video terminals on the VCR and TV (in place of the composite terminals).

2. Connect a set of audio cables from AUDIO OUT on the VCR back panel to AUDIO INPUT 1 on the TV back panel. The red cable connects to the R (right) channel and the white cable connects to the L (left) channel. If your VCR is mono (non-stereo), connect only the white (left) cable.

Note: Step 2 allows the use of the TV speakers with the VCR.

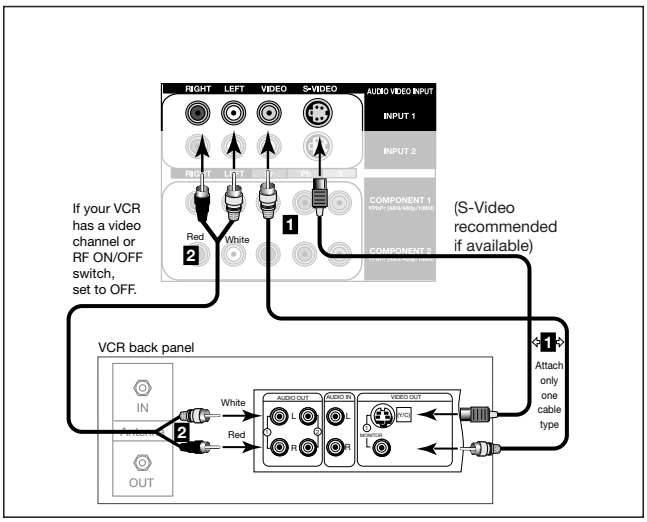


Figure 7. Adding compositve Video or S-Video with Audio Connections

Connecting an Audio/Video Surround Sound Receiver or Stereo System

A/V Receiver or Stereo System

Figure 8

1. Connect a set of audio cables from the Monitor OUTPUT AUDIO 2 on the back of the TV to the TV AUDIO INPUT on the back of the A/V Receiver. The red cable connects to the R (right) channel and the white cable connects to the L (left) channel.

   When you connect a digital A/V Receiver with Dolby Digital™ surround sound:

2. Connect one end of the digital audio cable supplied with the TV to the DIGITAL AUDIO OUTPUT on the back of the TV (connect the end of the cable with the ferrite or plastic cylinder). Connect the other end to the COAXIAL DIGITAL INPUT on the back of the A/V Receiver. Check the Owner's Guide for the A/V Receiver for information concerning the use of the digital input and switching between the digital sound and analog stereo sound from the TV.

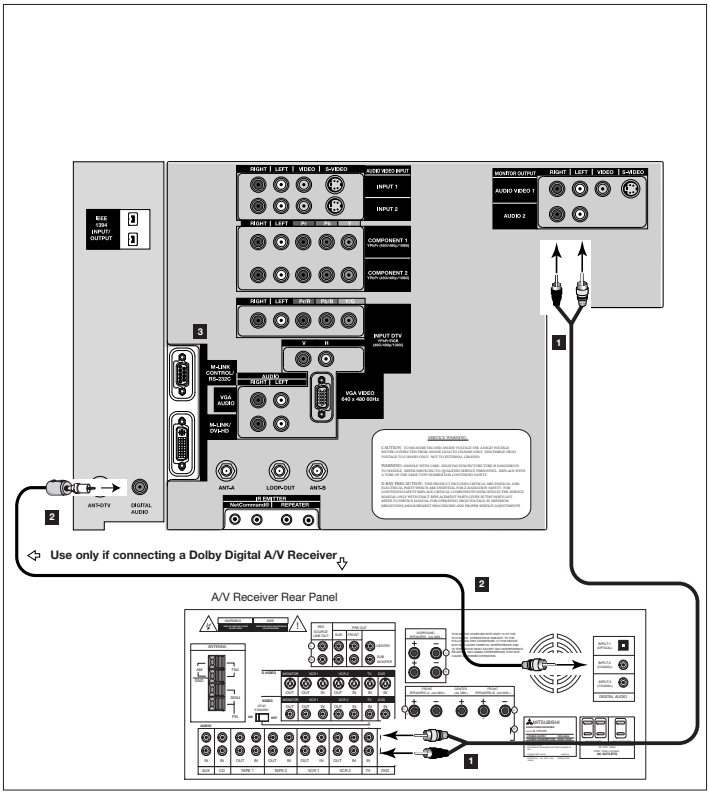


Figure 8. Connecting an A/V Receiver

Connecting a DVD Player

WARNING: **Do not display the same stationary images on the screen for more than 15% of your total TV viewing in one week. Examples of stationary images are letterbox top/bottom bars from DVD or other video sources, side bars when showing standard TV pictures on widescreen TV's, stock market reports, video game patterns, station logos, black or bright Closed caption backgrounds, web sites or stationary computer images. Such patterns can unevenly age the picture tubes causing permanent damage to the TV.**

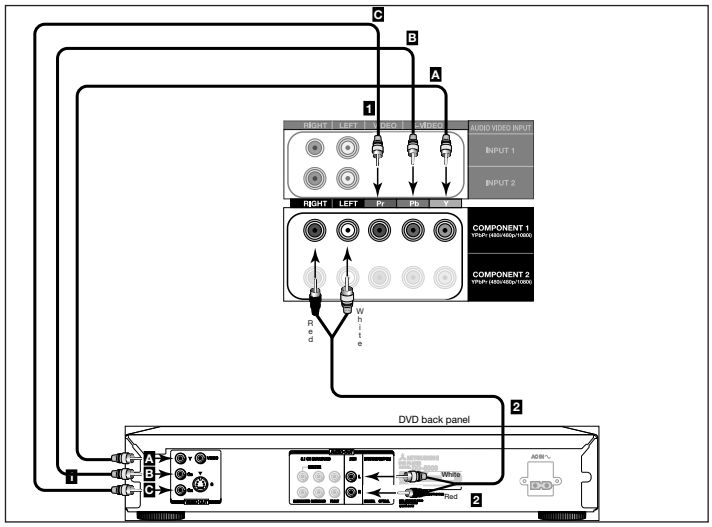


Figure 9. Connecting a DVD Player with Component Video

DVD Player with Component Video

Figure 9

1. Connect the Component Video cables from Y/Pr/Pb VIDEO OUT on the back of the DVD player to COMPONENT-1 on the TV back panel, matching the correct connection:

   - **Y** to Y
   - **Pr** to Pr
   - **Pb** to Pb

2. Connect a set of audio cables from AUDIO OUT on the back of the DVD player to COMPONENT-1 AUDIO Input on the TV back panel. The red cable connects to the R (right) channel, and the white cable connects to the L (left) channel.

IMPORTANT

See Appendix B for component video signal compatibility information.

For digital audio connections, see your A/V Receiver, DVD and Satellite Receiver Owner's Guides.

Note: NetCommand® assumes you connected your DVD player to Component 1. If you add a second DVD or use any other inputs for your DVD, this change must match in the NetCommand system. See "Editing NetCommand Setup" in Chapter 3 for more information.

Connecting a Satellite Receiver with S-Video

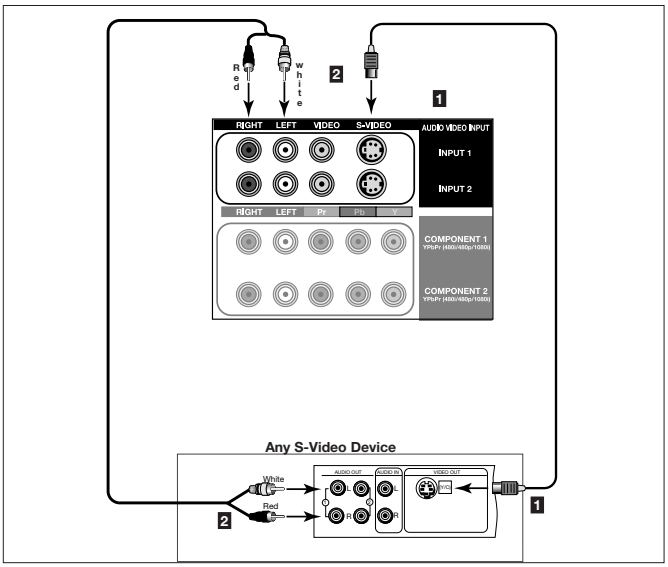


Figure 10. Connecting a Satellite Receiver with S-Video

Satellite Receiver with S-Video

Figure 10

1. Connect an S-Video cable from VIDEO OUT on the satellite receiver back panel to VIDEO INPUT-2 on the TV back panel.

2. Connect a set of audio cables from AUDIO OUT on the satellite receiver back panel to the AUDIO INPUT-2, on the TV back panel. The red cable connects to the R (right) channel and the white cable connects to the L (left) channel.

Note: Refer to the Satellite Receiver Owner's Guide for Dish Antenna connections.

Note: NetCommand® asssumes you connected your Satellite Receiver to Input-2. If you add a second Satellite Receiver or use any other inputs for your Satellite Receiver, this change must match in the NetCommand system. See "Editing NetCommand Setup" in Chapter 3 for more information.

Connecting an External Digital TV (DTV or HDTV) Receiver

DTV Connectors and Adaptors

Figure 11

The TV back panel has 5 RCA-type connectors for the Input-DTV. The back panel of your external DTV receiver may use RCA-type connectors or BNC-type connectors. If your DTV receiver comes with BNC type connections, you will need to purchase BNC to RCA adaptors to connect the TV to the DTV receiver. These adaptors should be available at most electronic supply stores.

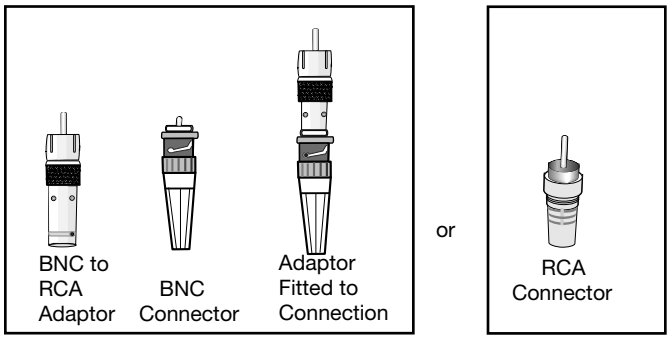


Figure 11. DTV Connectors and Adaptors

IMPORTANT

See Appendix B for component video signal compatibility information.

For digital audio connections, see your DTV Receiver and A/V Receiver Owner's Guides.

External DTV Receiver with Component Video Connections

Figure 12

1. Connect the outside antenna, cable or satellite to ANT or SATELLITE IN on the DTV receiver (see your DTV receiver's owner's guide for instructions and cable compatibility).

2. Connect the incoming terrestrial antenna or cable (not satellite) to ANT-A on the TV back panel (a coaxial splitter, available at most electronic supply stores, may be required to complete this installation).

3. Connect RCA-type cables from the YPrPb outputs on the DTV receiver to Input-DTV on the TV back panel, matching the correct connections:

   DTV Receiver to TV Back panel
   - **Y** to Y
   - **Pr** to Pr
   - **Pb** to Pb

   Note: You may need to set the Input-DTV assignment to YPrPb instead of RGB. Refer to the Edit NetCommand® Setup for instructions on changing this setting.

4. Connect the L (left) and R (right) audio cables from the DTV receiver to Input-DTV AUDIO on the TV back panel.

   Note: To utilize the benefits of a digital A/V receiver, connect your DTV receiver's digital audio out to a digital input on your digital A/V receiver.

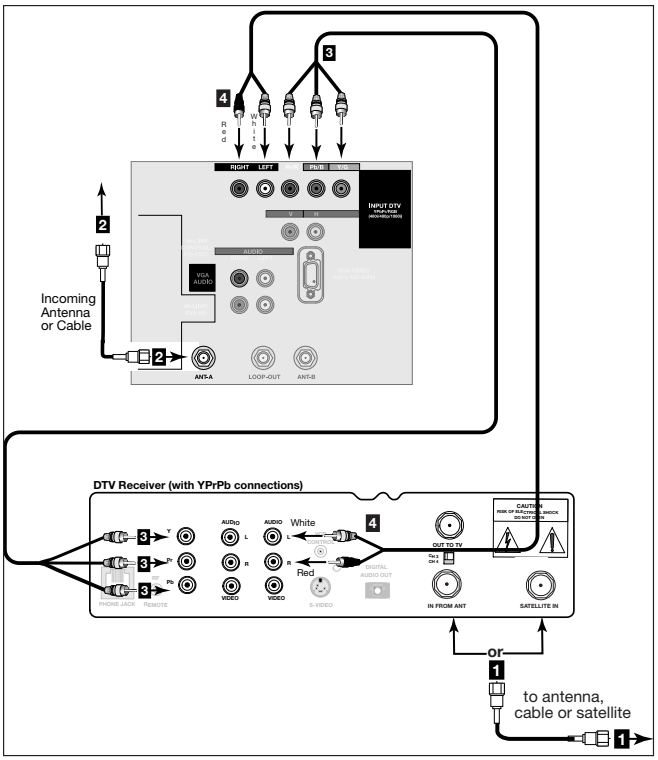


Figure 12. Connecting an External DTV Receiver with Component Video Connections

Connecting an External Digital TV (DTV or HDTV) Receiver with RGB, HV Video Connections

It may be necessary to obtain a VGA to RGB audio adaptor cable. These are available at most computer stores and many electronic stores. Some of the adaptor cables have RCA type connector ends, others have BNC type ends and will require adaptors as shown on page 21.

External DTV Receiver with RGB, HV Video Connections

Figure 13

1. Connect the outside antenna, cable or satellite to ANT or SATELLITE IN on the DTV receiver (see your DTV receiver owner's guide for instructions and cable compatibility).

2. Connect the incoming terrestrial antenna or cable (not satellite) to ANT-A on the TV back panel (a coaxial splitter, available at most electronic supply stores, may be required to complete this installation).

3. Connect RGB cables from the DTV receiver to Input-DTV on the TV back panel.

   Note: You may need to set the Input-DTV assignment to RGB instead of YPrPb. Refer to the Edit NetCommand® Setup for instructions on changing this setting.

   DTV Receiver to TV Back Panel

   - **G** (green) to Y/G
   - **R** (red) to Pr/R
   - **B** (blue) to Pb/B

4. Connect the H & V sync signals as shown below:

   - **H** (horizontal sync) to H
   - **V** (vertical sync) to V

All 5 cables (G,R,B,H and V) must be connected. 3 cables or Sync on green connections are incomplete and will not work.

5. Connect the L (left) and R (right) audio cables from the DTV receiver to Input-DTV AUDIO on the TV back panel.

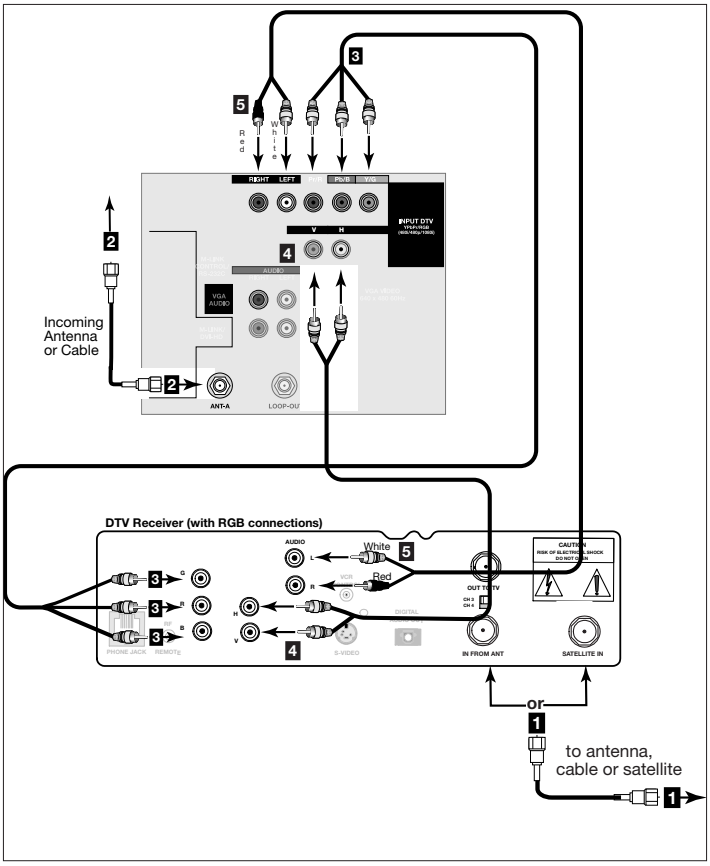


Figure 13. Connecting an External DTV Receiver with RGB, HV Video Connections

IMPORTANT

See Appendix B for RGB, HV video signal compatibility information.

For digital audio connections, see your DTV Receiver and A/V Receiver Owner's Guides.

Connecting MonitorLink™ with MonitorLink Control or DVI

MonitorLink and MonitorLink Control

Figure 14

1. Connect a MonitorLink cable from the Mitsubishi Receiver/Controller back panel to the TV back panel.

2. Connect the L (left) and R (right) audio cables from the Mitsubishi Receiver/Controller to AUDIO LEFT and AUDIO RIGHT on the MonitorLink section of the TV back panel.

3. Connect the MonitorLink Control cable from the Mitsubishi Receiver/Controller back panel to the TV back panel.

External DVI Device with DVI-HD

Figure 14

1. Connect a DVI cable from the DVI output of the external DVI type device to the MonitorLink/DVI-HD input on the back of the TV.

2. Connect the L (left) and R (right) audio cables from the external DVI device to AUDIO LEFT and AUDIO RIGHT on the MonitorLink section of the TV back panel.

NOTE: When used as a DVI Input, MonitorLink input is compliant with HDCP and the EIA-861 standards for standard, extended and high definition video. This input is not intended for use with personal computers or devices outputting video signals with computer resolution.

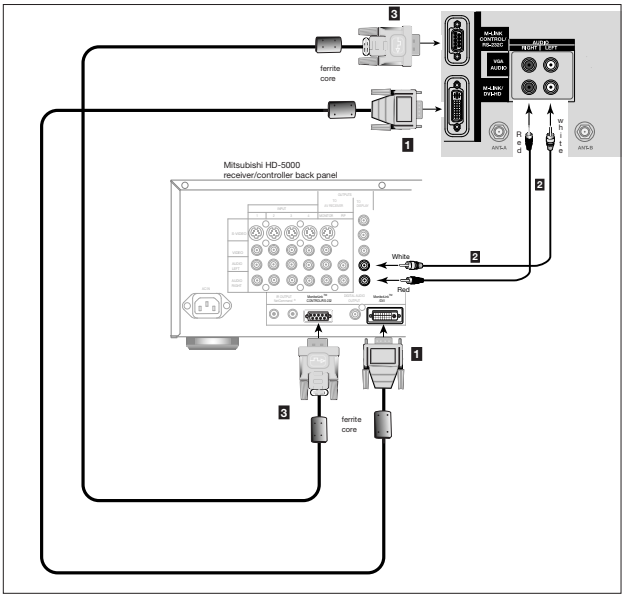


Figure 14. Connecting MonitorLink/DVI

CAUTION: To ensure continued FCC compliance, the user must use a shielded video interface cable with bonded ferrite cores when using the VGA input, and with bonded ferrite cores at both ends when using the MonitorLink/DVI input.

Connecting a Computer with a VGA Monitor

Computer with a VGA Monitor

Figure 15

1. Connect VGA Monitor Out from the computer to VGA Input on the TV back panel using a VGA compatible monitor cable. See Appendix B for signal compatibility.

2. Connect the L (left) and R (right) audio cables from the computer to VGA AUDIO on the TV back panel. In cases where your computer's audio output is a single mini- jack, a splitter is needed to complete this connection.

Note: To utilize the benefits of a digital A/V receiver, connect your computer's digital audio out, if available, to a digital input on your digital A/V receiver.

IMPORTANT

To prevent uneven phosphor wear from computer generated still images, turn on your computer's screen saver feature and set to 5 minutes or less.

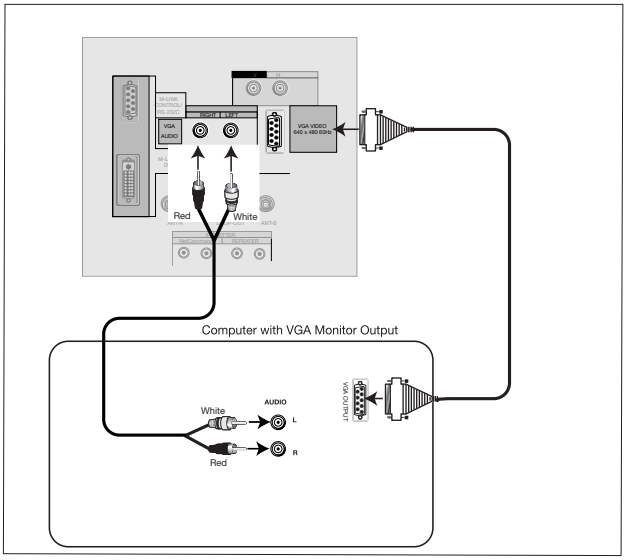


Figure 15. Connecting a Computer with a VGA Monitor

Connecting the IR Emitter NetCommand® or IR Repeater

IR Emitter NetCommand® or IR Emitter Repeater

Figure 16

IR Emitter NetCommand

The emitters connected to these jacks are used by the NetCommand system to control other devices such as VCR, DVD players, Cable boxes and Satellite receivers.

1. Connect the plug end of the supplied Quadruple IR Emitter Cable to one of the IR Output NetCommand jacks on the TV back panel.

OR ...

IR Emitter Repeater

The emitters connected to these jacks are not used by NetCommand, but will repeat any IR command received by the TV. These emitters allow the TV to be the remote control sensor for other devices outside the range of the hand-held remote control. Do not use these repeaters with devices that can receive the remote control signal directly, as the signals can interfere with each other.

1B. Connect the IR emitter to IR EMITTER-REPEATER on the TV back panel.

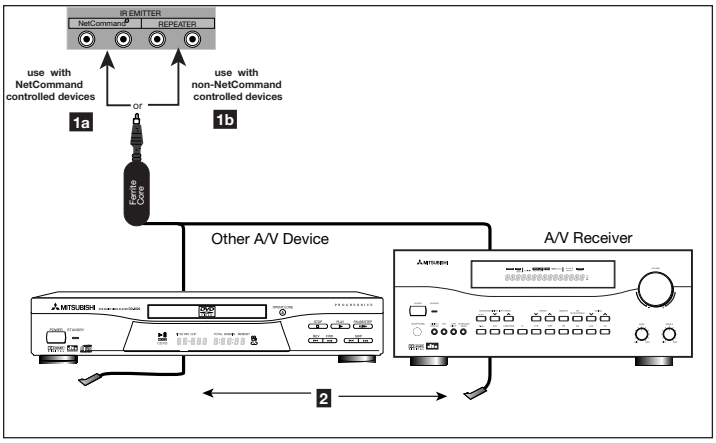


Figure 16. Connecting IR Emitter NetCommand or IR Emitter Repeater

After you have used 1A or 1B,

2. Run the cable for each of the emitter ends under, along side or over the top of each device to be controlled to the area of the front where the remote control sensor is located.

3. Place the emitter end in front of the remote control sensor of the device to be controlled. The emitter bulb should face the remote control sensor. This bulb emits infrared light in a cone shaped pattern. The bulb needs to be placed far enough from the remote control sensor to allow the cone pattern to include the sensor.

The remote control sensor is usually behind the plastic window of the front display panel. It is sometimes visible when you look through the display plastic using a flashlight and is normally a round or square cutout behind the plastic. If you cannot see the sensor and the device's Owner's Guide does not specify the location, you can find it by using the device's remote control. Hold the remote about 1/2 inch from the front of the device. Starting from one end of the display window plastic, press the POWER button.

If the device does not respond, move the remote control 1 inch toward the center and try again. Repeat this until the device responds. Note this location then start over from the other end of the display window plastic, repeating until the device responds again. The remote control sensor will be somewhere between these two positions. This is usually enough accuracy for the placement of the IR emitters.

4. With some devices, the emitter will work better facing downward from the top of the device. Some experimentation may be needed. If you are not going to be using all emitter ends, place the unused ends behind the devices so that they cannot send signals to the remote control sensors.

5. The emitter end being used can be secured in place using double stick tape.

IMPORTANT

If a single emitter end can be placed in a position that will operate more than one device, do not use a separate emitter end for the additional device. A single device receiving remote control signals from too many emitters or remote controls may not respond at all.

Chapter . . . 3

Basic Functions including NetCommand® Setup and Editing

Remote Control Functions: Overview 28
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Remote Control Functions: Overview

Overview

Figure 1, following page

1. **Slide Switch**: Select A/V product to be controlled by the remote control.

2. **Numbers**: Individually select channels or enter information into menus.

3. **POWER**: Turns power on and off for TV and other A/V products.

4. **SQV (SuperQuickView™)**: Scan through memorized lists of favorite channels.

5. **QV (QuickView™)**: Switch between the current channel and last channel viewed.

6. **GUIDE**: Display program guide for satellite receiver, some cable boxes or DVD Disc menu. Display Digital Channel Guide for Ant-DTV and other digital devices. Display Track List for A/V Disc.

7. **DEVICE**: Displays the Device Selection menu to select the device to view (Ant-A, Ant-B, Ant-DTV, devices connected to the TV's inputs or IEEE 1394 devices).

8. **CHANNEL**: Scroll up or down through memorized channels.

9. **VOLUME**: Change sound level. Volume on-screen displays are separate for analog devices and digital devices.

10. **MUTE**: Turn sound on or off.

11. **TV MENU**: Display ViewPoint on-screen menu system.

12. **HOME**: Exit TV on-screen menus and return to TV viewing.

13. **ENT(ENTer)**: Select a channel number or menu item.

14. **ADJUST**: Press ◀, ▶, ▲ and ▼ to navigate menus, change settings, and move the PIP on-screen location. Also operates many NetCommand® functions.

15. **DEVICE MENU**: Display menus for devices connected to TV.

16. **CANCEL**: Clear SQV and some menu entries. Add separator between major and sub channel for Ant-DTV digital channels, or cancel recordings.

17. **V-CHIP**: Turns On or Off the V-Chip Lock.

18. **INFO**: Display on-screen summary of the current device used and any broadcast information available (including current V-Chip information). See Appendix D for details.

19. **AUDIO**: Select the audio settings.

20. **VIDEO**: Select the video settings.

21. **PIP CH**: Scroll up or down through memorized channels for PIP or POP.

22. **PIP/POP**: Cycle through PIP and POP display choices.

23. **EXCH**: Exchange PIP or POP and main TV picture.

24. **SLEEP**: Set the TV to turn off within 2 hours. See ***Sleep Timer*** for setup instructions.

25. **PIP DEVICE**: Displays PIP Selection menu to select the PIP or POP image source device.

26. **FORMAT**: Change the shape and size of the main TV picture.

27. **CONNECT**: Initiate IEEE 1394 peer-to-peer connections.

28. **REC**: Record with a VCR, setup recordings for DVCR or IEEE 1394 devices.

29. **PAUSE**: Pause a VCR, DVD, A/V Disc or Memory card files. Freeze the PIP or POP image.

30. **REW/REV**: Rewind or reverse search with a VCR, reverse scan with a DVD, A/V Disc or Memory card files.

31. **PLAY**: Play a VCR, DVD, A/V Disc or Memory card files.

32. **STOP**: Stop a VCR, DVD, A/V Disc or Memory card files.

33. **FF/FWD**: Fast forward or forward search with a VCR or Memory card file, or fast play a DVD.

34. **Light:** Illuminates buttons or labels on the remote control. Located on the right side of the remote control.

Remote Control Functions:Operation and Care

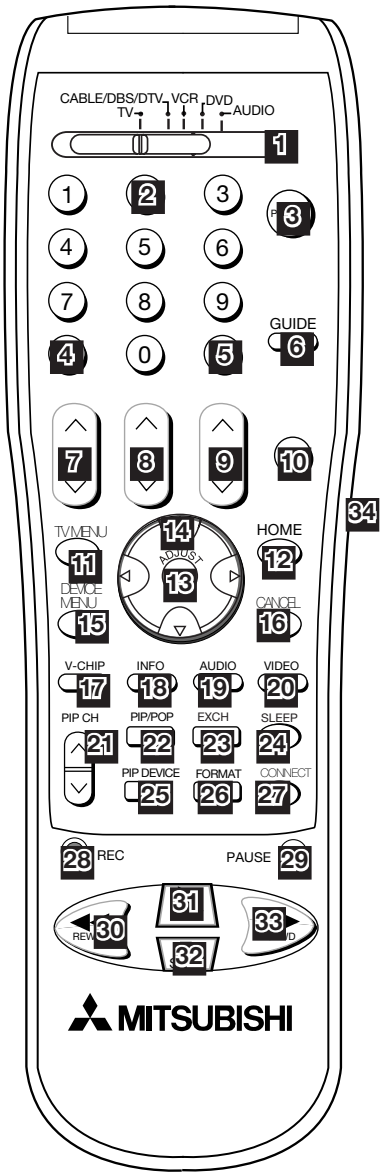


Figure 1. Remote Control Overview

Operation

Figure 2

Installing the Batteries:

1. Remove the remote control's back cover by gently pressing the ribbed tab in the direction of the arrow and sliding off the cover.

2. Load the batteries, making sure the polarities (+) and (-) are correct. For easier installation, insert the negative (-) side first.

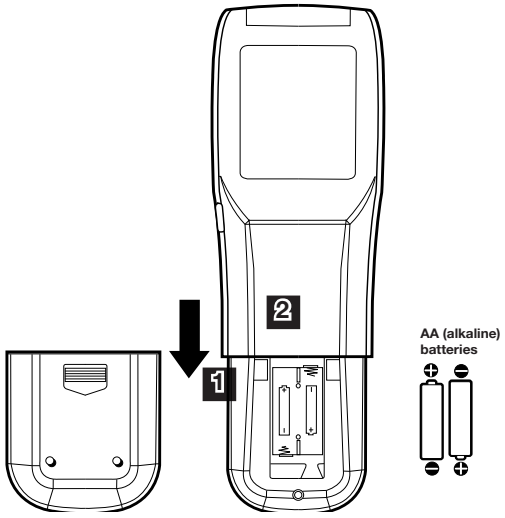


Figure 2. Operation: Installing the Batteries

Care

For Best Results from the Remote Control:

- Be within 20 feet of the equipment.
- Do not press two or more buttons at the same time unless instructed.
- Do not allow unit to get wet or become heated.
- Avoid dropping on hard surfaces.
- Do not use harsh chemicals to clean. Use only a soft, lightly moistened cloth.
- Do not mix new and old batteries.
- Do not heat, take apart or throw batteries into fire.
- Use only AA alkaline batteries.

Programming the Remote Control to Control NetCommand A/V Products

To Program the Remote to Control NetCommand A/V Products

Figure 3
(See NetCommand Supported Devices, for the list of A/V products supported by the NetCommand System.)

1. Move the slide switch at the top of the remote to the TV position.

2. Press and hold the POWER button on the remote control.

3. Enter the three digit code of 935, and then release the POWER button on the remote control.

4. The remote control is now programmed to send NetCommand signals to the TV so the TV can control the IEEE 1394 devices and older NetCommand supported or learned IR devices, while the slide switch is in the TV position.

   Note: To return the remote to the original configuration, repeat Steps 1 and 2. At Step 3, enter the code 000 and release the POWER button on the remote control.

NetCommand	CODE to ENTER
TV Control and NetCommand Devices:	**935**

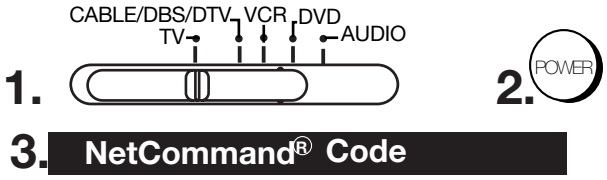


Figure 3. Programming the TV remote to control your NetCommand A/V devices.

The NetCommand Learning feature is able to learn the remote control signals of most Audio Video devices. However, there will be some signal sets that NetCommand cannot learn or you may choose to not use NetCommand. For these conditions you will find that the remote control has many brands of products already in the TV's remote control memory. See Appendix C for instructions on programming the remote control to operate these products independently of NetCommand. These additional remote control features are enabled by moving the slide switch at the top of the remote to other device positions.

3D Graphical ViewPoint® Menu System

Your TV has a special control system called NetCommand® that will control IEEE 1394 devices and selected older devices. For instructions on operating these control features, see the next page.

Your TV also has Mitsubishi's exclusive 3D Graphical ViewPoint® on-screen operating system, which provides on-screen information for menu choices and changes, using the TV's remote control.

Main Menu: This screen will always be the first screen that appears when you press the remote's TV MENU button

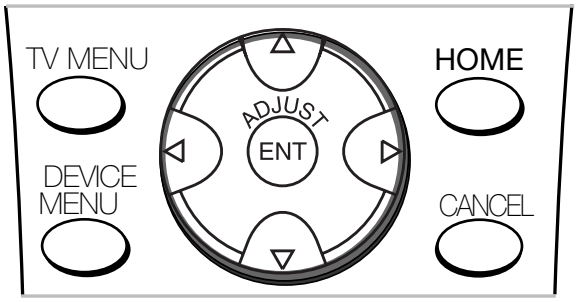
A picture (icon) will be highlighted when selected with the ADJUST arrows. When selected, the appropriate menu appears. You may then make changes within the menu or access sub-menus, if available.

You can also access sub-menus from a button. Sometimes, when you select a button an automatic function begins.

The ViewPoint® system includes the following special features:

- The currently selected icon or button is highlighted with a yellow outline; the text color is yellow.
- On-screen instructions, shown in the message line at the bottom of the menu, provide feature selection and adjustment information.
- Some on-screen menu options must be set before other options are available.

The following buttons on your remote control help you navigate within the ViewPoint® system :



ViewPoint® *navigation buttons*

1. ADJUST ◀ or ▶ to select the menu item you want to change.
2. ADJUST ▲ or ▼ to change the settings.
3. ENT(er) to enter into a menu, start an automatic function or select a checkbox.
4. CANCEL to clear a setting or stop an automatic function.
5. MENU to display the main menu or move back one menu screen at a time.
6. HOME to exit all menus and return to TV viewing.

You can change text boxes by pressing ADJUST ▲ or ▼. Some text boxes have preset labels. "Other" boxes allow you to select letters, numbers or characters to customize names.

When customizing names, press ADJUST ▲ or ▼ to select letters, numbers or characters. Press ENT(er) to move to the next character position. Use CANCEL to erase letters, numbers or characters or move one space backward.

Using the Remote Control with NetCommand® Setup

In order to use the TV's NetCommand feature, you need to provide some detailed information during the setup of your Mitsubishi TV. You must define the Manufacturer of the devices that are connected to the television, or learn the IR code remote control signals for the device connected. For each device, the input to the TV and A/V receiver, and the names for the device are pre-set during Initial NetCommand setup. You may change those inputs or names using the Edit NetCommand or Learn screens.

On your remote control, the ADJUST ◀ and ▶ buttons allow you to navigate left and right to different selections on the screen. The ADJUST ▲ and ▼ buttons allow you to:

- Change the selected radio button
- Change selection in text boxes
- Navigate up and down on the screen

The **ENT**(er) button allows you to:

- Confirm the selected character when naming a device
- Add or delete check marks in check boxes
- Select on-screen buttons to change screens

Textbox

Press ADJUST ▲ or ▼ to make a selection.

Checkbox

Checkmarks indicate the item or input is added or turned On. Press ENT(er) when the Checkbox is highlighted to add or delete a checkmark. When viewing the Review screen, a Checkbox reflects which devices are turned On or Off, or connected to the TV.

Radio Buttons

The setting changes when a radio button is selected

Control Buttons

Much like the software on your computer, you will use graphic buttons to navigate through the NetCommand Setup screen. Highlight the button and press ENT(er) to select the function.

<Back Button

Use the **<Back** button to navigate back to the previous screen.

Next> Button

Use the **Next>** button to navigate forward to the next screen.

Cancel Button

The **Cancel** button will cancel out any changes you are currently making without saving them into memory. When you select the Cancel key, NetCommand will prompt you to confirm that you want to cancel the changes you are currently making. If you select Cancel during Initial Setup, You can setup NetCommand later by selecting the Initial option at the Setup menu.

NetCommand® Initial Setup Guide

The easiest way to setup NetCommand is to follow the on-screen directions. For reference, below is a list of the screens that you will use. You will find detailed information regarding each screen in the pages following this Guide.

Initial

Initial NetCommand Setup:

When you first turn on your TV. You may Cancel at any screen.

↓

Language Screen

Page 35 Figure 1

↓

Information Screen

Page 35 Figure 2

↓

Device Setup Screen (used when manufacturer is known). If the manufacturer is unknown, see Edit NetCommand for the device.

Page 35 Figure 3

↓

Review Screen

Page 36 Figure 4

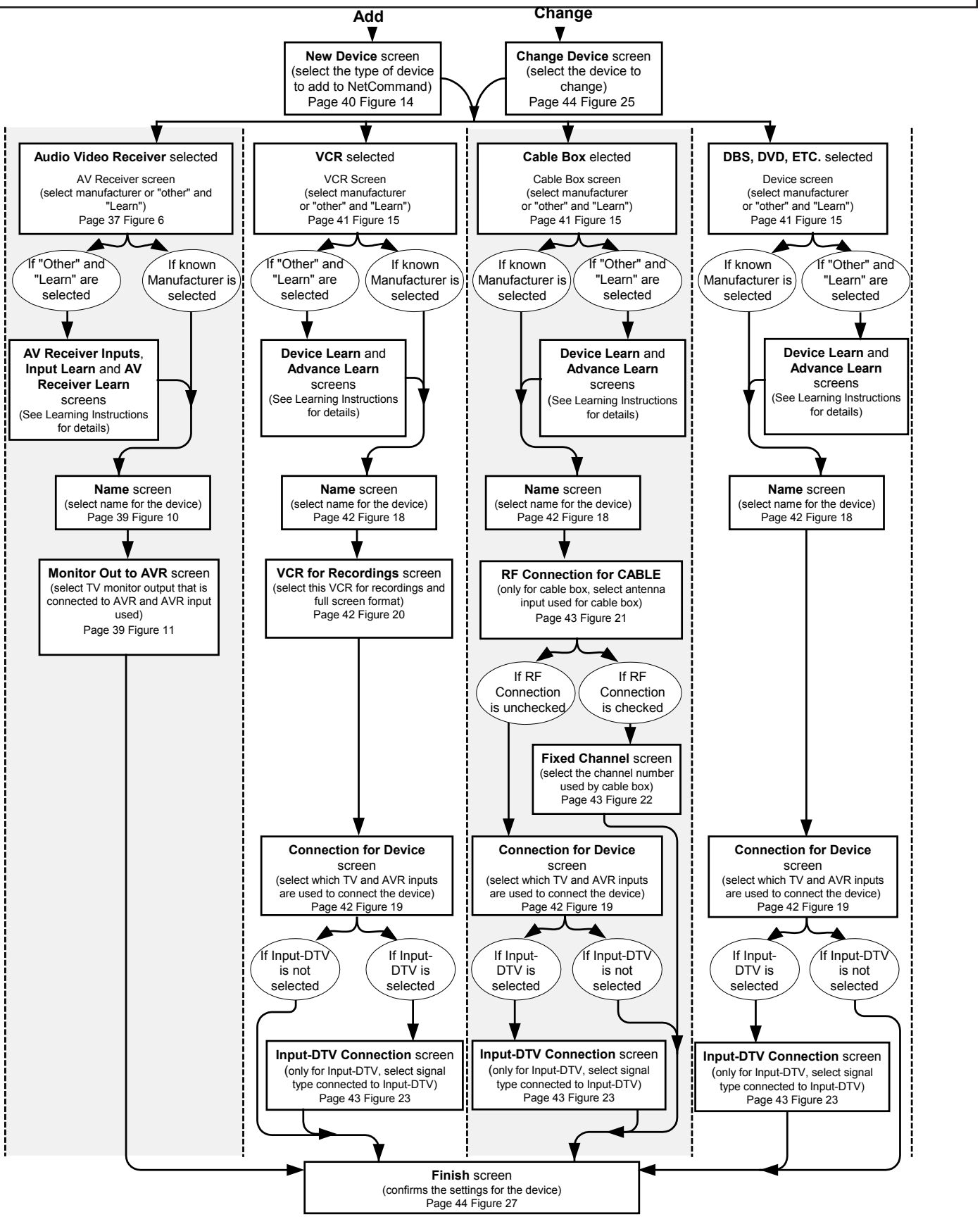
↓

Finish Screen

Page 36 Figure 5

NetCommand® Editing Guide

The easiest way to setup NetCommand is to follow the on-screen directions. For reference, below is a list of the screens that you will use. You will find detailed information regarding each screen in the pages following this Guide.


Add
Change
New Device screen (select the type of device to add to NetCommand) Page 40 Figure 14
Change Device screen (select the device to change) Page 44 Figure 25
Audio Video Receiver selected
AV Receiver screen (select manufacturer or "other" and "Learn") Page 37 Figure 6
VCR selected
VCR Screen (select manufacturer or "other" and "Learn") Page 41 Figure 15
Cable Box elected
Cable Box screen (select manufacturer or "other" and "Learn") Page 41 Figure 15
DBS, DVD, ETC. selected
Device screen (select manufacturer or "other" and "Learn") Page 41 Figure 15
If "Other" and "Learn" are selected
If known Manufacturer is selected
AV Receiver Inputs, **Input Learn** and **AV Receiver Learn** screens (See Learning Instructions for details)
Device Learn and **Advance Learn** screens (See Learning Instructions for details)
Name screen (select name for the device) Page 39 Figure 10
Page 42 Figure 18
Monitor Out to AVR screen (select TV monitor output that is connected to AVR and AVR input used) Page 39 Figure 11
VCR for Recordings screen (select this VCR for recordings and full screen format) Page 42 Figure 20
RF Connection for CABLE (only for cable box, select antenna input used for cable box) Page 43 Figure 21
If RF Connection is unchecked
If RF Connection is checked
Fixed Channel screen (select the channel number used by cable box) Page 43 Figure 22
Connection for Device screen (select which TV and AVR inputs are used to connect the device) Page 42 Figure 19
If Input-DTV is not selected
If Input-DTV is selected
Input-DTV Connection screen (only for Input-DTV, select signal type connected to Input-DTV) Page 43 Figure 23
Finish screen (confirms the settings for the device) Page 44 Figure 27

NetCommand® Initial Setup

When you first power On your new Mitsubishi TV, the initial setup screens appear. In order to use NetCommand, select these screens after you have connected the compatible equipment to the TV. Most IR remote control signal formats can be learned by NetCommand.

Language Screen

Figure 1

When you first turn on your TV, the Welcome screen displays and asks you to select either English or Spanish as the language for the on-screen menus. The default language is English. To change Language later, use Setup in the Main Menu. Selecting **Cancel** at this screen will cause the default language (English) to appear.

Welcome
Welcome to Mitsubishi! To begin setup of your bigscreen TV, select the language using the ADJUST keys. Then select the Next button (below) and press the ENTer key.
Bienvenido a Mitsubishi. Para empezar a programar su televisor, seleccione el idioma usando los botones ADJUST. Seleccione el botón Sigue (abajo) y presione el botón ENTer.
English
Español
Language
Idioma
Next >
Cancel

Figure 1. Language screen

NetCommand (Information) Screen

Figure 2

The NetCommand (Information) Screen describes how to start or delay the initial NetCommand Setup. This screen displays automatically the first time you power On your new TV, after the Welcome screen.

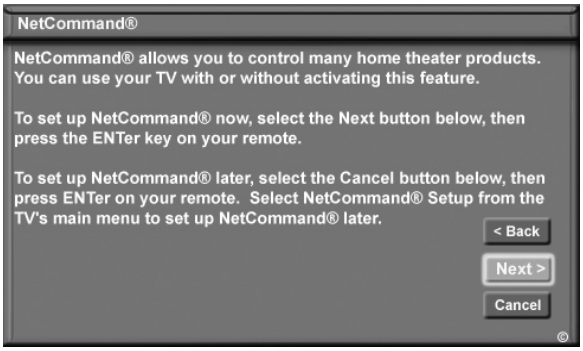

NetCommand®
NetCommand® allows you to control many home theater products. You can use your TV with or without activating this feature.
To set up NetCommand® now, select the Next button below, then press the ENTer key on your remote.
To set up NetCommand® later, select the Cancel button below, then press ENTer on your remote. Select NetCommand® Setup from the TV's main menu to set up NetCommand® later.
< Back
Next >
Cancel

Figure 2. Information screen

If the NetCommand Setup is cancelled before it's completed, you can restart the NetCommand setup by:

1. A press of TV MENU on the remote control to display the TV Main menu.
2. Select Setup. The available options for NetCommand are: Add, Review or Initial. Change and Delete will be grayed out.
3. Press ADJUST ▲, ▼, ◀ or ▶ to select Initial.
4. Press ENT(er). The Device Setup screen displays.

Device Setup Screen

Figure 3

If the devices connected to the TV are already in NetCommand memory, you can quickly select them at this screen. Press ADJUST ◀ or ▶ to move to each device type. Press ADJUST ▲ or ▼ to select the manufacturer of each device type. Select "Other" if the manufacturer is not listed. Later, you can use the Change setting in the Edit NetCommand option of the Setup menu to learn the remote control signals for this device. Select "None" for device types that are not connected.

If the manufacturer for your A/V Receiver is not listed, you cannot select "Other". Instead, select "None". Later, you can use the "Add" feature in the Edit NetCommand option of the Setup menu to learn the remote control signals for this device.

If you have a camcorder connected, check the Camcorder box. NetCommand will not be able to control the camcorder, but will reserve the front input to use with the camcorder. When you are finished, select **Next>** and press ENT(er).

> **Note:** If you selected "Other" for any of the device names, the TV can "Learn" the connected device (see page 37).

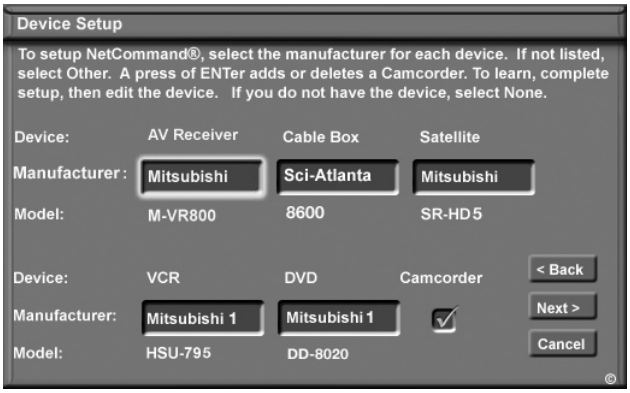


Figure 3. Device Setup screen

IMPORTANT

You may use your TV without setting up NetCommand. You may also set up NetCommand at a later time by choosing Setup from the Main menu, then selecting Initial from the Edit NetCommand menu.

Review Screen

Figure 4

After you have made your device choices the Review Screen will display. It is important to review the settings to ensure that they are correct. If necessary, you can use **<Back** to return to the Device Setup screen to make changes.

> **Note:** The Review screen lists the TV input and A/V Receiver input used with each device. You must correctly identify the inputs you used when you connected the devices. If you have not connected your devices, write down these inputs as a guide. If you cannot use these inputs, or if you would like to change the name of a device, use the instructions in Edit NetCommand to make necessary changes.
>
> **Note:** If you select **Next>** on the Review screen, all selections made are finalized.

On the Review Screen, adding or deleting check marks will turn the adjacent devices, memory cards or inputs On or Off. If 1394 devices are not connected to the TV, the 1394 Name list will not appear on the Review screen.

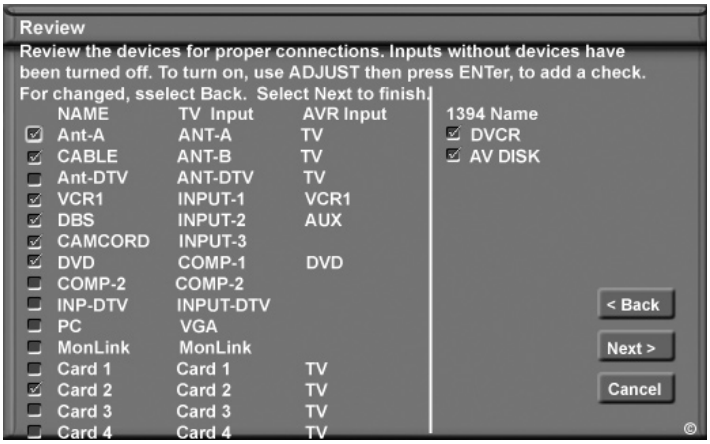


Figure 4. Review screen

Finish Screen

Figure 5

To finalize your selections and complete the NetCommand setup, select **Finish** from the Finish screen.

> **Note:** If you wish to change any of the pre-configured inputs or names for the devices, or add devices not in the pre-configured setup, select **Edit** to display Edit NetCommand menu.

If your A/V Receiver was not listed, select **Edit** to assign all devices to new AVR inputs.

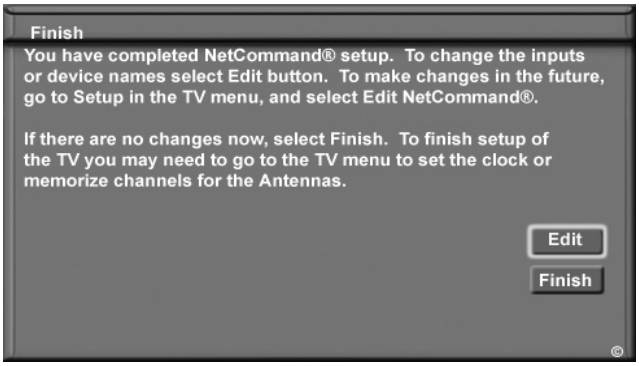

Finish
You have completed NetCommand® setup. To change the inputs
or device names select Edit button. To make changes in the future,
go to Setup in the TV menu, and select Edit NetCommand®.
If there are no changes now, select Finish. To finish setup of
the TV you may need to go to the TV menu to set the clock or
memorize channels for the Antennas.
Edit
Finish

Figure 5. Finish screen

It is still necessary to memorize the available channels for Antenna A, Antenna B and Antenna DTV. You may do that by going to the TV Main menu and selecting Antenna. Instructions to memorize channels are found in the Antenna menu section.

Edit NetCommand®, Adding an A/V Receiver

A/V Receiver Screen

Figure 6

If you selected "None" as the manufacturer of the A/V Receiver connected to the TV during the initial NetCommand Setup, you may Add the A/V Receiver and have NetCommand learn it. The same screens are displayed if using Edit NetCommand.

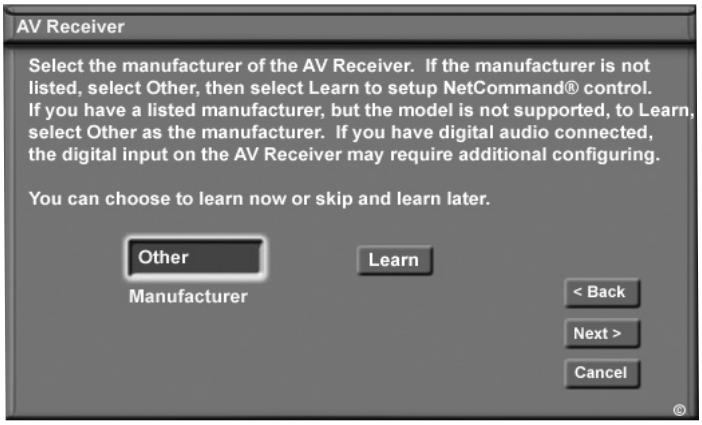

AV Receiver
Select the manufacturer of the AV Receiver. If the manufacturer is not listed, select Other, then select Learn to setup NetCommand® control. If you have a listed manufacturer, but the model is not supported, to Learn, select Other as the manufacturer. If you have digital audio connected, the digital input on the AV Receiver may require additional configuring.
You can choose to learn now or skip and learn later.
Other
Manufacturer
Learn
< Back
Next >
Cancel

Figure 6. A/V Receiver screen

Choose ONE of these options:

1. Select a recognized manufacturer. The model number optimized for NetCommand will display at the bottom of the screen. If a number follows the manufacturer's name, (example: Mitsubishi 1), this indicates additional models are optimized for that manufacturer. For many device types, non-listed models will operate in the same way as the listed models and you can still use the pre-loaded setting.

   After selecting **Next>**, the screens that follow are: the Name Screen (Figure 10), Monitor Out screen (Figure 11), ending with the Finish screen (Figure 12).

2. Select "Other", then highlight "Learn" and press ENT(er). This will allow you to have NetCommand learn the remote control signals of this new device.

   After selecting "Learn" and pressing ENT(er), the screens that follow are: the A/V Receiver Inputs screen (Figure 7), A/V Receiver Input Learn screen (Figure 8), A/V Receiver Learn screen (Figure 9), Name screen (Figure 10), Monitor Out screen (Figure 11), ending with the Finish screen (Figure 12).

3. Select "Other", skip Learn and select **Next>**. This will allow the device to appear and will allow NetCommand to switch inputs to use this device. However, NetCommand will not be able to control this device. Later you may use the "Change" option in the Setup menu to learn the remote control signals.

   After selecting **Next>**, the screens that follow are: the AV Receiver Input screen (Figure 7), Name screen (Figure 10), Monitor Out screen (Figure 11), ending with the Finish screen (Figure 12).

A/V Receiver Inputs

Figure 7

Only if "Other" is selected as the manufacturer, after selecting "Learn" and pressing ENT(er), you will see the A/V Receiver Input screen. After selecting the number of inputs, this screen will not appear again.

Depending on your A/V Receiver's capability, you may have devices connected to seven (7) A/V inputs. Press ADJUST ▲ or ▼ to select the number of inputs on your A/V receiver that have connected devices.

If the number of connected inputs changes, you will need to delete the A/V Receiver and add it again, as described above.

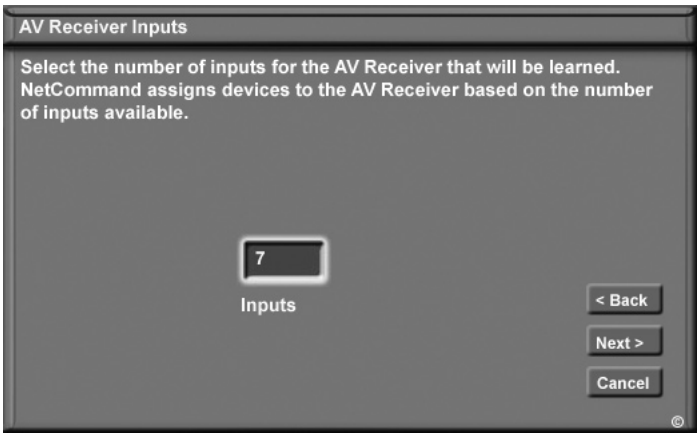

AV Receiver Inputs
Select the number of inputs for the AV Receiver that will be learned. NetCommand assigns devices to the AV Receiver based on the number of inputs available.
7
Inputs
< Back
Next >
Cancel

Figure 7. A/V Receiver Input screen

Edit NetCommand®, Adding an A/V Receiver, continued

A/V Receiver Input Learn Screen

Figure 8

NetCommand can now learn the remote control signals used to select each input on the A/VReceiver.

1. Press ADJUST ◀ or ▶ on the TV remote to select the check box for each function to be learned.

2. Press ENT(er) and the function name will begin to flash to confirm the ready-to-learn status.

3. Press the button on the A/V Receiver's remote control that corresponds to the select function. A check mark will appear and the function name will stop flashing. This confirms the signal learned status.

4. To test the learned command, press ENT(er) on the TV remote. The A/V Receiver will perform the selected function. The A/V Receiver needs to be turned on and the IR emitters properly placed for the test to be successful (see page 26 for IR emitter placement).

5. To customize the input names, press ADJUST ▶ to move to the Input Name text box and then press ADJUST ▲ or ▼ and ENT(er) to select each letter of the name. These names will appear on the Review screen as the A/V Receiver's input names.

6. To erase the learned input signal, highlight the check box for that input and press CANCEL.

7. Repeat for each connected input.

8. When the input selection signals have been learned and the inputs named, press ADJUST ▶ to select **Next>** and move to the A/V Receiver Learn screen.

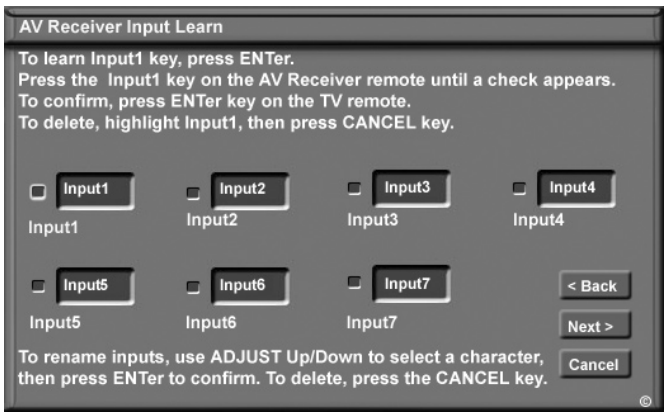

AV Receiver Input Learn
To learn Input1 key, press ENTer.
Press the Input1 key on the AV Receiver remote until a check appears.
To confirm, press ENTer key on the TV remote.
To delete, highlight Input1, then press CANCEL key.
Input1
Input2
Input3
Input4
Input5
Input6
Input7
< Back
Next >
Cancel
To rename inputs, use ADJUST Up/Down to select a character, then press ENTer to confirm. To delete, press the CANCEL key.

Figure 8. A/V Receiver Input Learn screen

A/V Receiver Learn Screen

Figure 9

1. Press ADJUST ◀ or ▶ on the TV remote to select the check box for each function to be learned.

2. Press ENT(er) and the function name will begin to flash to confirm the ready-to-learn status.

3. Press the button on the A/V Receiver's remote control that corresponds to the selected function, A check mark will appear and the function name will stop flashing. This confirms the signal learned status.

4. To test the learned command, press ENT(er) on the TV remote. The A/V Receiver will perform the selected function. The A/V Receiver needs to be turned on and the IR emitters properly placed for the test to be successful (see page 26 for IR emitter placement).

5. Repeat for each function to be learned.

6. To erase a learned function, highlight the check box for that function and press CANCEL.

7. When the function signals have been learned, press ADJUST ▶ to select **Next>** and move to the Name screen.

Hint: *If your A/V Receiver remote control uses a single button for both Power On and Power Off, don't learn the Power Off function. If your A/V Receiver uses a single button to toggle between digital and analog sound, then learn only Analog to Digital. If your A/V Receiver automatically switches between analog and digital audio, then you don't need to learn either Analog to Digital or Digital to Analog functions.*

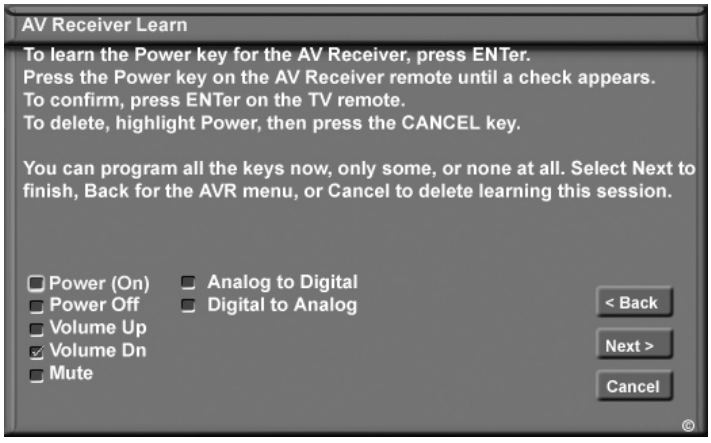

AV Receiver Learn
To learn the Power key for the AV Receiver, press ENTer.
Press the Power key on the AV Receiver remote until a check appears.
To confirm, press ENTer on the TV remote.
To delete, highlight Power, then press the CANCEL key.
You can program all the keys now, only some, or none at all. Select Next to finish, Back for the AVR menu, or Cancel to delete learning this session.
Power (On)
Power Off
Volume Up
Volume Dn
Mute
Analog to Digital
Digital to Analog
< Back
Next >
Cancel

Figure 9. A/V Receiver Learn screen

Edit NetCommand®, Adding an A/V Receiver, continued

Name Screen

Figure 10

The Name screen allows you to change the default name for the A/V Receiver to a custom name of up to eight characters (including a blank space), selecting from letters, numbers, and nine different characters. Using the TV's remote, press ADJUST ▲ or ▼ to select each letter, then press ENT(er) to move to the next position. Press CANCEL to delete the current letter and move back one character position. When in the first position, the CANCEL button will return the name to the default name.

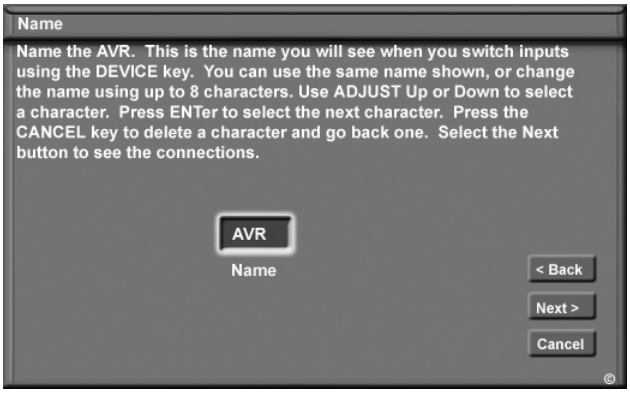

Name
Name the AVR. This is the name you will see when you switch inputs using the DEVICE key. You can use the same name shown, or change the name using up to 8 characters. Use ADJUST Up or Down to select a character. Press ENTer to select the next character. Press the CANCEL key to delete a character and go back one. Select the Next button to see the connections.
AVR
Name
< Back
Next >
Cancel

Figure 10. Name screen

Monitor Out to AVR Screen

Figure 11

Use this screen if you connected Audio 2 Out or Audio Video 1 Out from Monitor Output of the TV to the A/V Receiver. Select "Audio 2" or "Audio Video 1" on this screen and then select the input on the A/V Receiver connected to Monitor Out.

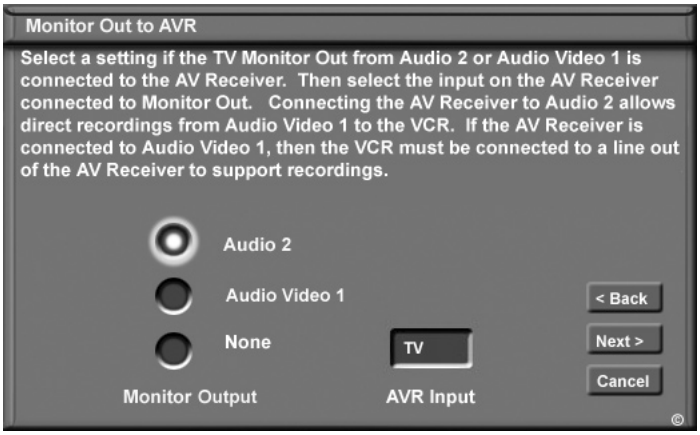

Monitor Out to AVR
Select a setting if the TV Monitor Out from Audio 2 or Audio Video 1 is connected to the AV Receiver. Then select the input on the AV Receiver connected to Monitor Out. Connecting the AV Receiver to Audio 2 allows direct recordings from Audio Video 1 to the VCR. If the AV Receiver is connected to Audio Video 1, then the VCR must be connected to a line out of the AV Receiver to support recordings.
Audio 2
Audio Video 1
None
Monitor Output
TV
AVR Input
< Back
Next >
Cancel

Figure 11. Monitor Out to AVR screen

Audio 2 is the default selection and allows an analog VCR to be connected directly to Audio Video 1 out for recordings. If Audio Video 1 is chosen, then the VCR must be directly connected to VCR record outputs on the A/V Receiver, to be able to record Ant-DTV programs.

Finish Screen

Figure 12

To finalize your selections and complete the A/V Receiver setup, select **Finish** from the Finish screen.

> **Note:** To assign learned inputs to devices, select the Edit button to display the Edit NetCommand menu.

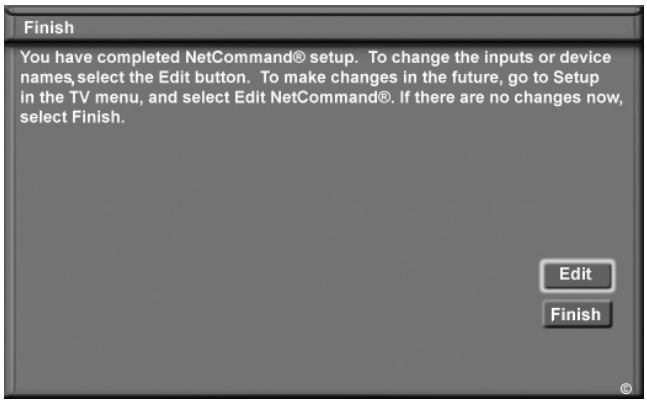

Finish
You have completed NetCommand® setup. To change the inputs or device names, select the Edit button. To make changes in the future, go to Setup in the TV menu, and select Edit NetCommand®. If there are no changes now, select Finish.
Edit
Finish

Figure 12. Finish screen

Edit NetCommand®, Adding Devices

Mitsubishi's NetCommand offers the ability to edit your home theater configuration so that you can add new devices, change device settings and connection inputs, delete devices and even learn the remote control IR signals of devices that are not already in the NetCommand memory.

NOTE: Select **Next>**, then press **ENT(er)** at each screen, to move forward to the next screen.

Edit NetCommand Option at the Setup Menu

Figure 13

The five setting on the Setup Menu: Add, Change, Delete, Review and Initial are used to change the NetCommand setup to reflect a change in your home theater system. To learn the remote control IR signals of a device that is not already in the NetCommand memory, add this device as manufacturer of "Other". The learning screens will then automatically be included in the series of screens used for adding the device.

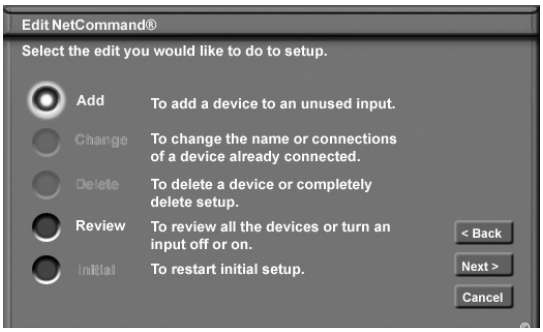

Edit NetCommand®
Select the edit you would like to do to setup.
Add
To add a device to an unused input.
Change
To change the name or connections of a device already connected.
Delete
To delete a device or completely delete setup.
Review
To review all the devices or turn an input off or on.
Initial
To restart initial setup.
< Back
Next >
Cancel

Figure 13. Setup Menu Edit NetCommand Option

Add:
Add a new device to the NetCommand setup.

Change:
Change the brand/model or input connections of a device already listed in the configuration. Learn the remote control signals of devices listed as "Other" brands.

Delete:
Remove a device or erase the complete NetCommand home theater configuration. The learned remote control signals are erased when the associated device is deleted.

Review:
View a list of all devices and input connections in the NetCommand home theater configuration. This is also where you can turn on or off unused TV inputs or devices.

Initial:
Start the setup at the beginning. This button only becomes available after deleting the complete configuration, or if NetCommand was not set up when the TV was first powered On.

Add

Figure 14

Select "Add" from the Edit NetCommand screen, and the New Device screen will display. Select the Device type that you would like to add. You may add your A/V Receiver (if not added in Initial setup) Cable Box, Camcorder, DBS, DVD, Laser Disc, PC and VCR.

At the next screen, choose the manufacturer. If you choose "Other" for the manufacturer, the device (A/V Receiver, Cable, DBS, DVD or VCR) can be learned. For device types Laser, Cam(corder), and PC, the "Learn" screen is skipped. There is no NetCommand support and no learning.

At the next screen, you can keep the default Name or select a custom Name for the device, using ADJUST ▲ or ▼ to select letters A-Z, numbers 0-9, and/or symbols (!.&'/ :*- and blank) for each character of the name you would like for the selected channel.

The next screen displays the Connection screen (RF Connection for Cable Box). Select the TV and A/V Receiver inputs that the device is connected to. Connecting only audio to the A/V Receiver is recommended. The A/V Receiver may need configuring for digital audio.

New Device
To add a new device, select the device type. Then the manufacturer for the device can be entered.
VCR
Device Type
< Back
Next >
Cancel

Figure 14. Add screen

Edit NetCommand® Adding Devices, continued

[Device] Screen

Figure 15

If you selected "Other" in the Initial NetCommand Setup screen, then you can edit the device name and start learning. If you selected "None", then you can add a device. If you have added a new device or changed an input in your home theater system, use this screen to start learning.

Our examples show the choices for adding a VCR, however, the same type of screens will appear for any DBS (Direct Broadcast Satellite), DVD player or Cable Box.

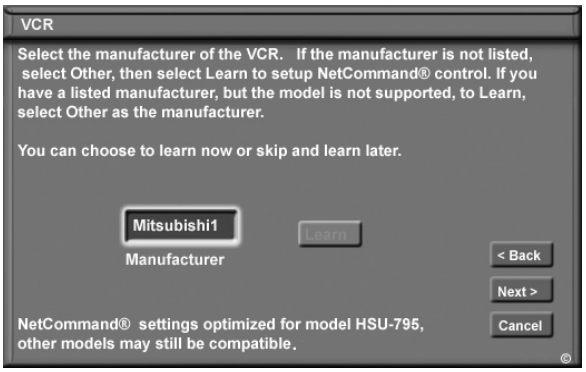

VCR
Select the manufacturer of the VCR. If the manufacturer is not listed, select Other, then select Learn to setup NetCommand® control. If you have a listed manufacturer, but the model is not supported, to Learn, select Other as the manufacturer.
You can choose to learn now or skip and learn later.
Mitsubishi1
Manufacturer
Learn
< Back
Next >
Cancel
NetCommand® settings optimized for model HSU-795, other models may still be compatible.

Figure 15. [Device] screen

Choose ONE of these options:

1. Select a recognized manufacturer. The model number optimized for NetCommand will display at the bottom of the screen. If a number follows the manufacturer's name, (example: Mitsubishi 1), this indicates additional models are optimized for that manufacturer. For many device types, non-listed models will operate in the same way as the listed models and you can still use the pre-loaded setting.

   After selecting **Next>**, the screens that follow are: the Name Screen (Figure 18), Connection screen (Figure 19) and specialized device screens (Figures 20-24), ending with the Finish screen (Figure 27).

2. Select "Other", then highlight "Learn" and press ENT(er). This will allow you to have NetCommand learn the remote control signals of this new device.

   After selecting "Learn" and pressing ENT(er), the screens that follow are: [Device] Learn screen (Figure 16), [Device] Advanced Learn screen (Figure 17), Name screen (Figure 18), Connection screen, (Figure 19) and specialized device screens (Figures 20-24), ending with the Finish screen (Figure 27).

3. Select "Other", skip Learn and select **Next>**. This will allow the device to appear and will allow NetCommand to switch imputs to use this device. However, NetCommand will not be able to control this device. Later you may use the "Change" option in the Setup menu to learn the remote control signals.

   After selecting **Next>**, the screens that follow are: the Name Screen (Figure 18), Connection screen (Figure 19) and specialized device screens (Figures 20-24),

[Device] Learn Screen

Figure 16

Shown only if "Learn" was selected (Figure 15)

1. Press ADJUST ▲ , ▼ , ◀ or ▶ to select the check box for each function to be learned.

2. Press ENT(er) and the function name will begin to flash to confirm the ready-to-learn status.

3. Press the button on the device's remote control that corresponds to the selected function. A check mark will appear and the function name will stop flashing. This confirms the signal learned status.

4. To test the learned command, press the ENT(er) button on the TV remote. The device should perform the selected function. The device needs to be turned on and the IR emitters properly placed for the test to be successful (see page 24 for IR emitter placement).

5. Repeat for each function to be learned.

6. To erase a learned function, highlight the check box for that function and press CANCEL.

7. When the function signals have been learned, press ADJUST ▶ to select **Next>** and move to the [Device] Advanced Learn screen.

Hint: *If the device's remote control uses a single button for both Power On and Power Off, don't learn the Power Off function.*

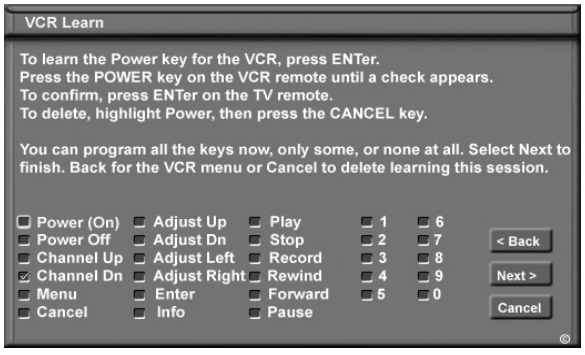


Figure 16. [Device] Learn screen

Edit NetCommand®, Adding Devices, continued

Please refer to the Editing Guide on page 34 to see if the screen described below is necessary for your device setup.

[Device] Advanced Learn Screen

Figure 17

After learning the basic device keys, the [Device] Advanced Learn screen allows you to learn any special keys for your device. Most common IR remote control signal formats can be learned by NetCommand.

A table of specialized device keys is shown in Appendix E. You only need to learn the functions your devices respond to and can ignore the functions that do not apply to your device.

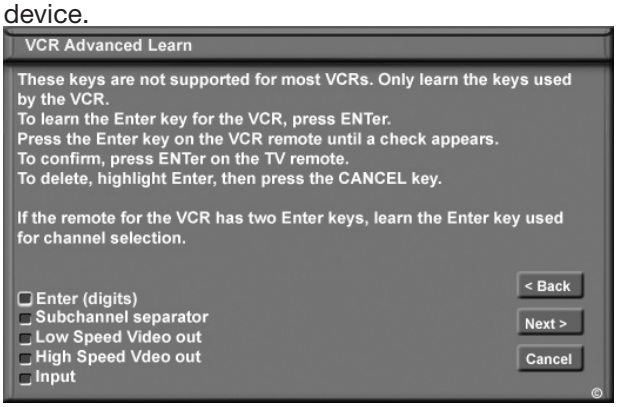

VCR Advanced Learn
These keys are not supported for most VCRs. Only learn the keys used by the VCR.
To learn the Enter key for the VCR, press ENTer.
Press the Enter key on the VCR remote until a check appears.
To confirm, press ENTer on the TV remote.
To delete, highlight Enter, then press the CANCEL key.
If the remote for the VCR has two Enter keys, learn the Enter key used for channel selection.
Enter (digits)
Subchannel separator
Low Speed Video out
High Speed Vdeo out
Input
< Back
Next >
Cancel

Figure 17 [Device] Advanced Learn screen

Name Screen

Figure 18

The Name screen allows you to change the default name for each device to a custom name of up to eight characters (including a blank space), selecting from letters, numbers and nine different characters. Press ADJUST ▲ or ▼ to select each letter, then press ENT(er) to move to the next position. Press CANCEL on the remote to delete the current letter and move back one character position. When in the first position, the CANCEL button will return the name to the default name.

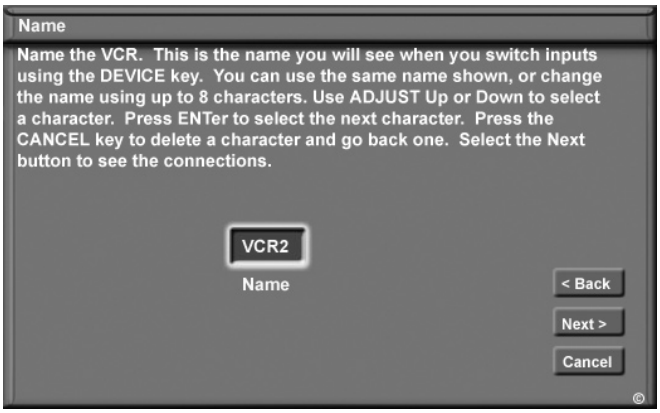

Name
Name the VCR. This is the name you will see when you switch inputs using the DEVICE key. You can use the same name shown, or change the name using up to 8 characters. Use ADJUST Up or Down to select a character. Press ENTer to select the next character. Press the CANCEL key to delete a character and go back one. Select the Next button to see the connections.
VCR2
Name
< Back
Next >
Cancel

Figure 18. Name screen

Connection for [Device] Screen

Figure 19

This screen allows you to match the device names with the inputs that were connected to the TV in Chapter 2. Inputs 1-3, Components 1 & 2, Input-DTV and/or the A/V Receiver all need to be checked, if connected. Add or remove check marks to indicate what type of connections (Audio, Video or Both) are used with each input.

> **Note:** Video inputs to the A/V Receiver are normally used to transfer signals to the line input of a VCR for recording. Mitsubishi recommends leaving Video unchecked, except when the VCR for recording is connected to the A/V Receiver. If your VCR inputs are connected to TV outputs Audio Video 1, then you do not need to connect video to your A/V Receiver

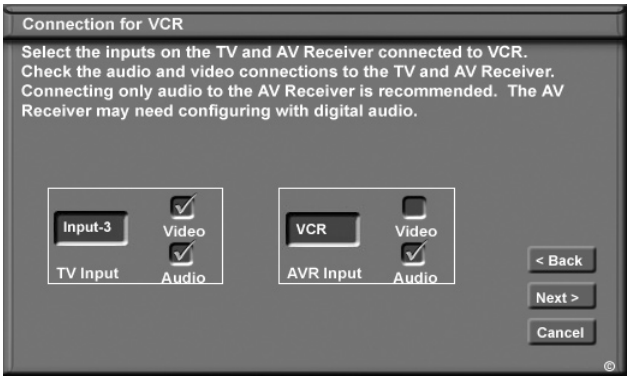

Connection for VCR
Select the inputs on the TV and AV Receiver connected to VCR.
Check the audio and video connections to the TV and AV Receiver.
Connecting only audio to the AV Receiver is recommended. The AV Receiver may need configuring with digital audio.
Input-3
Video
Audio
TV Input
VCR
Video
Audio
AVR Input
< Back
Next >
Cancel

Figure 19. Connection for [Device] screen

VCR for Recordings Screen

Figure 20

This screen allows you to select the VCR you would like to use for recording. You may also select whether you want the recorded 16:9 signals from Antenna DTV or IEEE-1394 devices to be cropped (sides are cut off) or Anamorphic (full screen). If Anamorphic is selected for viewing, choose the Standard format for the best quality playback.

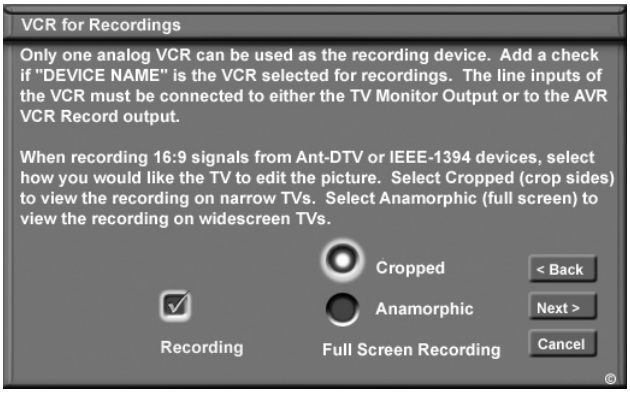

VCR for Recordings
Only one analog VCR can be used as the recording device. Add a check if "DEVICE NAME" is the VCR selected for recordings. The line inputs of the VCR must be connected to either the TV Monitor Output or to the AVR VCR Record output.
When recording 16:9 signals from Ant-DTV or IEEE-1394 devices, select how you would like the TV to edit the picture. Select Cropped (crop sides) to view the recording on narrow TVs. Select Anamorphic (full screen) to view the recording on widescreen TVs.
Cropped
Anamorphic
Recording
Full Screen Recording
< Back
Next >
Cancel

Figure 20. VCR for Recordings screen

Edit NetCommand®, Adding Devices, continued

Please refer to the Editing Guide on page 34 to see if the screen described below is necessary for your device setup.

RF Connection for Cable Screen

Figure 21

The RF Connection screen displays only when Adding or Changing a Cable Box. If your Cable Box is connected to a TV Antenna input, make sure the RF checkbox is checked. Select the TV antenna input that is used with the Cable Box. If the Cable Box is also connected to a VCR for recording, select that VCR.

If your Cable box is connected using Audio/Video cables, make sure the RF checkbox is unchecked. Then the next screen will be Connection (Figure 19), to allow the selection of the TV input used with the Cable Box.

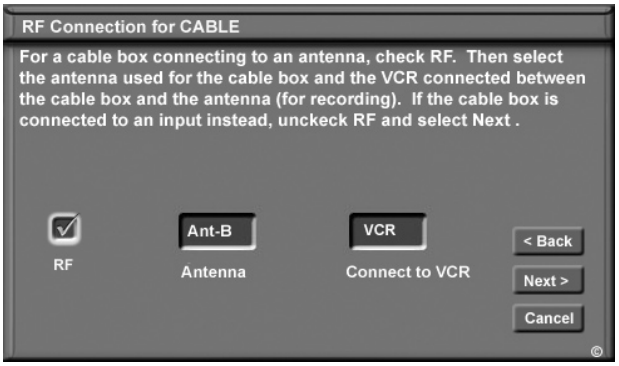

RF Connection for CABLE
For a cable box connecting to an antenna, check RF. Then select the antenna used for the cable box and the VCR connected between the cable box and the antenna (for recording). If the cable box is connected to an input instead, unckeck RF and select Next .
RF
Ant-B
Antenna
VCR
Connect to VCR
< Back
Next >
Cancel

Figure 21. RF Connection for Cable screen

Fixed Channel Screen

Figure 22

If the device being connected is a cable box and the “RF” box is checked (Figure 21), the Fixed Channel screen allows you to select the channel number used for output by your cable box. The Fixed Channel screen allows you to select the channel number that is used for output by your cable box. The default channel is 003.

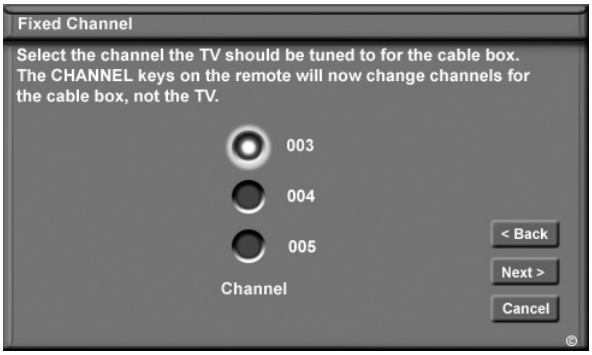

Fixed Channel
Select the channel the TV should be tuned to for the cable box. The CHANNEL keys on the remote will now change channels for the cable box, not the TV.
003
004
005
Channel
< Back
Next >
Cancel

Figure 22. F ixed Channel screen

Input-DTV Connection Screen

Figure 23

This screen displays only if the device selected in the Connection screen (Figure 19) is connected to Input-DTV. This is usually DBS, but can be Cable Box. The Input-DTV Connection screen allows you to select the connection type, RGB (HV) or Component YPbPr you are using to connect your cable box or DBS.

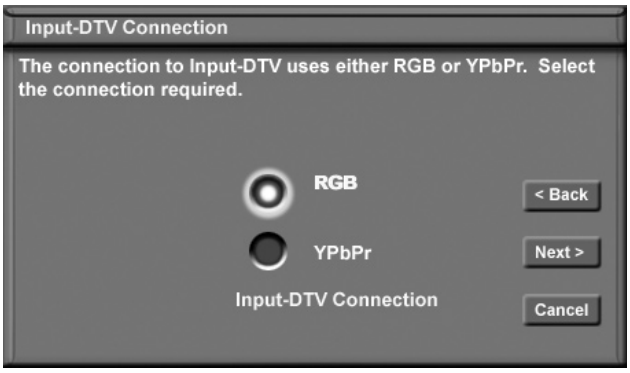


Figure 23. Input-DTV Connection screen

IR Code for [Device] Screen

Figure 24

This screen only displays if an added device has the same IR code as a previously added device of the same type and manufacturer. You can specify the IR setting for the new device. For example, for the second Mitsubishi VCR you can specify the IR Code setting to VCR-B, if the primary Mitsubishi VCR is using the VCR-A IR code.

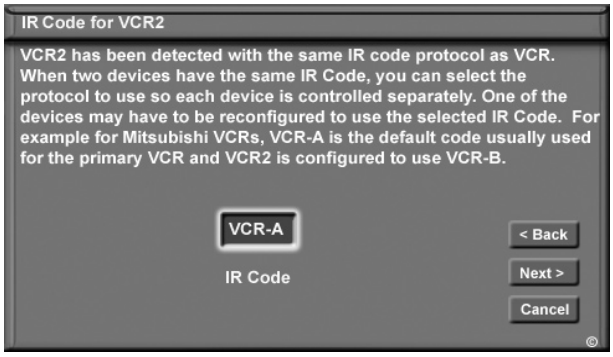

IR Code for VCR2
VCR2 has been detected with the same IR code protocol as VCR. When two devices have the same IR Code, you can select the protocol to use so each device is controlled separately. One of the devices may have to be reconfigured to use the selected IR Code. For example for Mitsubishi VCRs, VCR-A is the default code usually used for the primary VCR and VCR2 is configured to use VCR-B.
VCR-A
IR Code
< Back
Next >
Cancel

Figure 24. IR Code for [Device] screen

Edit NetCommand®, Change or Delete Devices, Finish Screen

Change

Figure 25

Selecting Change from the Setup menu screen, displays the Change screen. To change a device, select the device by name, not type. You can change the name or input connections to the TV and A/V Receiver. If "Other" is selected for the manufacturer then you can also "Learn". The rest of the screens that follow are the same as when you Add a device.

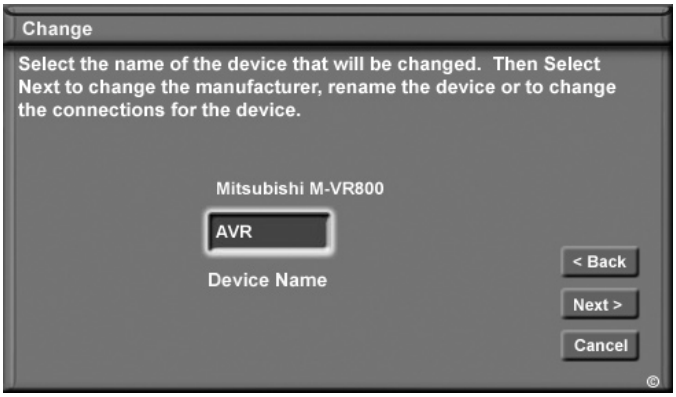

Change
Select the name of the device that will be changed. Then Select Next to change the manufacturer, rename the device or to change the connections for the device.
Mitsubishi M-VR800
AVR
Device Name
< Back
Next >
Cancel

Figure 25. Change screen

Delete

Figure 26

Selecting Delete from the Setup menu, displays the Delete screen. You can choose to delete a single device by selecting the device you would like to delete, or you can delete the entire NetCommand configuration. After you have chosen the device, or the entire configuration, you will be prompted to confirm your choice to delete. If you select the Entire Configuration, the Initial button becomes available on the Edit NetCommand screen. If you delete an "Other" device that you learned the remote control signals for, the learned signals are erased.

Delete
Please choose what you would like to delete, a single device, or the complete configuration, including the manufacturer of all devices previously entered.
Device
Delete
Entire Configuration
< Back
Next >
Cancel

Figure 26. Delete screen

Finish Screen

Figure 27

To finalize your selections and complete the NetCommand setup, select **Finish** from the Finish screen.

> **Note:** To change any of the inputs or names for the devices, or add devices not in included in the initial settings, select Edit to display the Edit NetCommand menu.

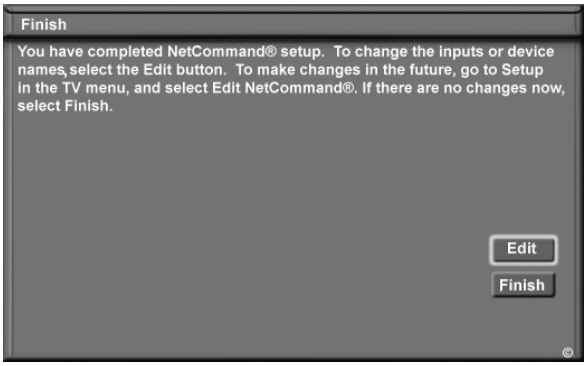

Finish
You have completed NetCommand® setup. To change the inputs or device names, select the Edit button. To make changes in the future, go to Setup in the TV menu, and select Edit NetCommand®. If there are no changes now, select Finish.
Edit
Finish

Figure 27. Finish screen

IMPORTANT

NetCommand does not allow you to delete a device or change the connections for a device (like a VCR or a DVD player) if the device (input) is currently being displayed by the TV.

Switch the TV to a different device from the one you are changing or deleting. To change the A/V Receiver, you need to be listening to the TV speakers.

Connecting IEEE 1394 Devices

4-Pin Style vs. 6-Pin Style

There are two different types of connectors used for IEEE 1394 terminals and cables, a 4-pin and a 6-pin style.

4 pin connector

The 4-pin connector is capable of sending digital audio signals, digital video signals and digital control signals back and forth between devices. Your TV has three 4-pin type connection jacks available. One is on the front panel and two are on the back.

6 pin connector

The 6-pin connector is capable of sending the same digital audio, video and control signals as the 4-pin connector, but the 6-pin connector is also able to send low voltage electrical power. The TV does not have 6 pin connectors.

The purpose of this low voltage electrical power is to provide the needed operating power to a device that is not connected directly to the household AC power such as a camcorder. A device with a 6-pin connector can send this electrical power to another device, or receive electrical power from another device, or simply use a 6-pin connector without using the two additional pins.

6 pin to 4 pin adaptor

A 6-pin connector cannot be connected directly to a 4-pin jack, and vice versa. To connect a 6-pin device to a 4-pin device, you will need to obtain a 6-pin to 4-pin adaptor cable. These cables are available from electronic and computer stores.

If you connect a 6-pin device to the TV (such as a camcorder) that is designed to receive electrical power from another 6-pin device, then you will need to connect the camcorder directly to the household AC, or use the camcorder's battery for power. If this is not possible, then the camcorder will need to be connected directly to another 6-pin device in the network that can provide the electrical power.

Connection Styles

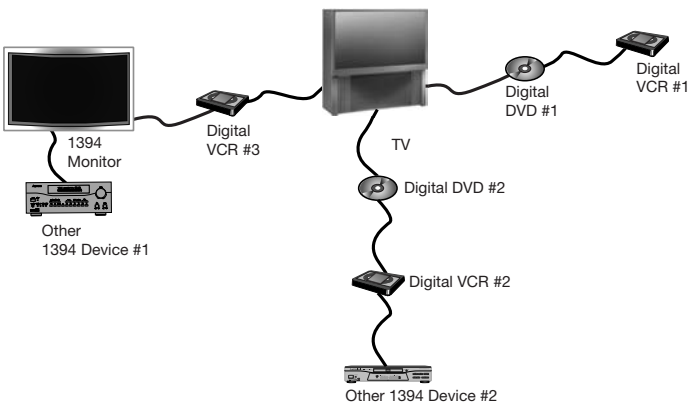
There are two different connection styles that can be used when connecting IEEE 1394 devices. Use the style that fits your network of audio/video products.

Direct Device-To-Device Style

The IEEE 1394 offers you the capability to chain devices, unlike previous audio and video connections where you had to individually connect each device directly to the TV. For example, you can connect your D-VHS to your 1394 DVD Player and then connect the 1394 DVD Player to the TV. The resulting IEEE 1394 chain will allow you to add more devices to the chain. You will be able to see each video device on the TV's Device Selection Menu and send information from any IEEE 1394 device to other compatible devices.

Hub Connection Style

The IEEE 1394 also offers you the capability to connect your devices using the TV as a hub within the audio/video network. Each device can send information, which may include audio and video, to any other device in the network.



Connecting IEEE 1394 Devices, continued

When Connecting IEEE 1394 Devices

- Do not loop the last device in the chain back to the TV. When the device chain is looped, the TV may not be able to work with the other devices.

- Place devices that have only a mechanical (two-position) power switch at the end of the chain or leave the power switch in the ON position. When turned OFF, IEEE 1394 signals may not be able to pass through the device to other devices.

- Place devices with the slowest communication speed at the end of the chain. Sometimes the communication speed will be marked near the IEEE 1394 connector with an "S" number. The higher the number, the faster the communication speed. Devices with slow communication speed can interfere with IEEE 1394 signals from faster devices. When using NetCommand to set up a digital recording between a faster and slower device, select "Record Later".

- Do not use an IEEE 1394 cable longer than 15 feet between each device.

- This TV is an IEEE 1394a Device. IEEE 1394b is currently under development. This system will provide for longer distances and multi-room applications. Included in the IEEE 1394b systems are IEEE 1394a to IEEE 1394b converters to maintain compatibility with this TV and other IEEE 1394a devices.

Adding IEEE 1394 Devices Automatically

When an IEEE 1394 device is connected into the TV network and is powered ON, the new device will automatically announce its presence. This process is called device discovery and can take up to 1 minute. Some non-audio/video or non-compatible IEEE 1394 devices, such as Personal Computers (PCs), may not announce their presence to the TV. The TV will not be able to show these devices in the Device Selection menu, however, they can coexist and will still be available to other devices on the IEEE 1394 network that are compatible with these non-audio/video devices.

IEEE 1394 cable boxes and satellite receivers may require that you use the remote control that came with those devices. For some compatible devices, the Cable/DBS/DTV position of the TV remote control may be able to control operation.

New 1394 Device Screen

Figure 1

When your TV discovers a new IEEE 1394 device, the New 1394 Device screen will appear. Selecting "Add" will include the device in the Device Selection menu. Selecting "Not Added" will not add the device to the Device Selection menu. If the IEEE 1394 device does not provide audio and video, you may not want to add that device to the TV's Device Selection menu. Devices that were discovered but not added to the Device Selection menu will still be listed in the Review screen of the Edit NetCommand® menu.

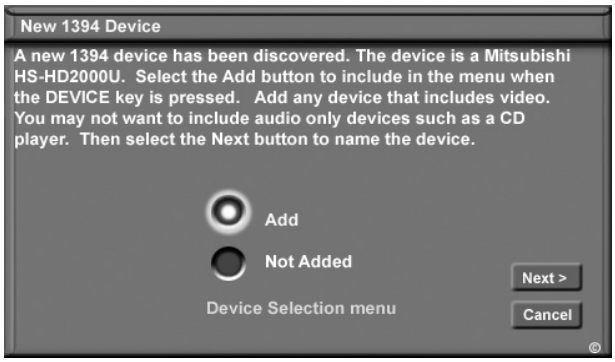

New 1394 Device
A new 1394 device has been discovered. The device is a Mitsubishi HS-HD2000U. Select the Add button to include in the menu when the DEVICE key is pressed. Add any device that includes video. You may not want to include audio only devices such as a CD player. Then select the Next button to name the device.
Add
Not Added
Device Selection menu
Next >
Cancel

Figure 1. New 1394 Device screen

Name for 1394 Device Screen

Figure 2

If you choose to add the discovered IEEE 1394 device, the Name for 1394 Device screen will appear. Name the device or use the default name that appears automatically.

Some IEEE 1394 digital devices, such as some D-VHS VCRs, can also operate as analog devices. For example, some D-VHS VCRs can record and play as VHS or S-VHS. This allows you to play analog rental tapes or analog tapes from your established library or make analog recordings from antenna or cable systems. To use the analog capability, check the Analog Connection box.

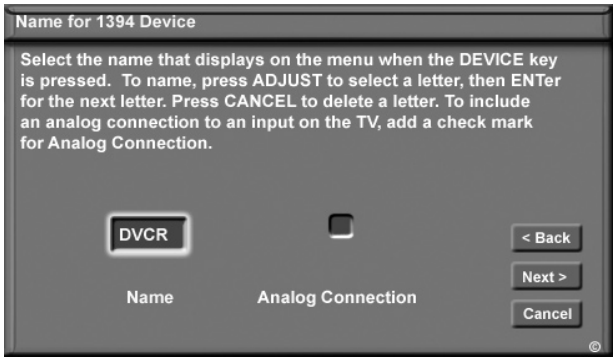

Name for 1394 Device
Select the name that displays on the menu when the DEVICE key is pressed. To name, press ADJUST to select a letter, then ENTer for the next letter. Press CANCEL to delete a letter. To include an analog connection to an input on the TV, add a check mark for Analog Connection.
DVCR
Name
Analog Connection
< Back
Next >
Cancel

Figure 2. Name for 1394 Device screen

Adding IEEE 1394 Devices Automatically

IEEE 1394 Device Type Screen

Figures 3 and 4

If the new IEEE 1394 device is also connected using analog inputs, you will need to define the device type. Select the type of device, such as a VCR.

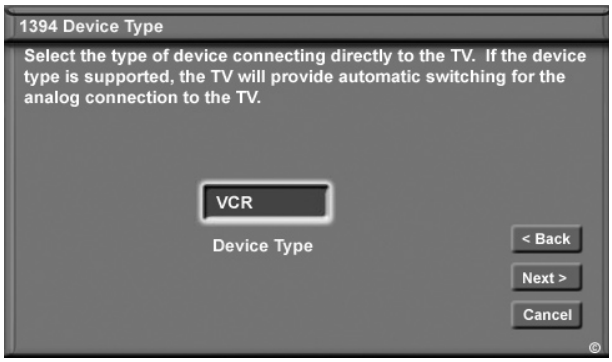

1394 Device Type
Select the type of device connecting directly to the TV. If the device type is supported, the TV will provide automatic switching for the analog connection to the TV.
VCR
Device Type
< Back
Next >
Cancel

Figure 3. IEEE 1394 Device Type screen

Once the device type is selected, then the Device screen is displayed so the manufacturer can be selected. If the manufacturer is listed, then you may be able to control this device while it is operating as an analog VCR. For example, if the IEEE 1394 device you have added is a Mitsubishi D-VHS VCR, and you have selected an analog connection as a second connection, then you will select Mitsubishi for the manufacturer. If the manufacturer is not listed, select “Other” and use the Learn screens.

Be sure to place an IR Emitter in front of the remote control sensor, just as you have done for other NetCommand® traditional devices. It is necessary to use the IR Emitter only when the D-VHS VCR is being used as an S-VHS or VHS VCR. When the D-VHS VCR is playing or recording digital signals in D-VHS, the TV will control the VCR through the IEEE 1394 cable.

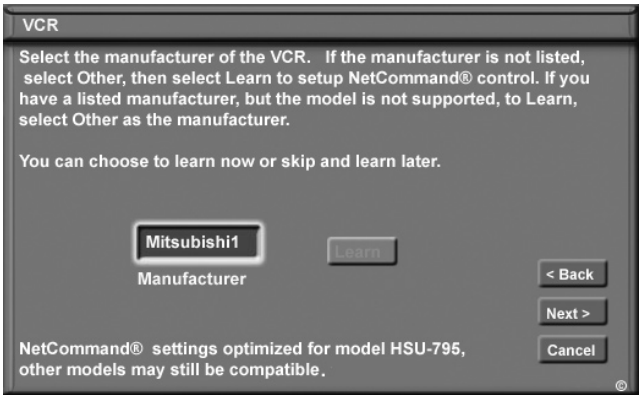

VCR
Select the manufacturer of the VCR. If the manufacturer is not listed, select Other, then select Learn to setup NetCommand® control. If you have a listed manufacturer, but the model is not supported, to Learn, select Other as the manufacturer.
You can choose to learn now or skip and learn later.
Mitsubishi1
Manufacturer
Learn
< Back
Next >
Cancel
NetCommand® settings optimized for model HSU-795, other models may still be compatible.

Figure 4. Device screen

Connection Screen

Figure 5

Select the TV input that you used when you connected the video or S-Video cables. You may also select the TV or A/V Receiver input you used when you connected the stereo audio cables. Match the input names for the TV Input and A/V Receiver Input selections. If your A/V Receiver has other inputs than those listed in the menu, those other inputs are not available for NetCommand.

The playback and record control of some DV camcorders may still operate by the IEEE 1394 cable automatically, even though you must use the video or S-video cable for the picture. In this case, when you select the Camcorder, be sure to select analog (not digital) from the pop up when a camcorder is selected from the Device Selection menu. Then the picture is shown via the analog connection but control is from IEEE 1394.

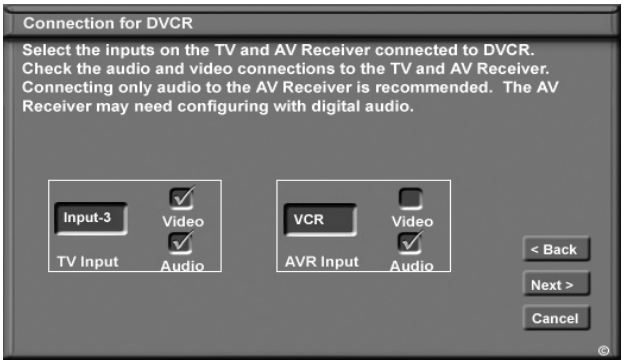

Connection for DVCR
Select the inputs on the TV and AV Receiver connected to DVCR. Check the audio and video connections to the TV and AV Receiver. Connecting only audio to the AV Receiver is recommended. The AV Receiver may need configuring with digital audio.
Input-3
TV Input
Video
Audio
VCR
AVR Input
Video
Audio
< Back
Next >
Cancel

Figure 5. Connection screen

Finish Screen

Figure 6

To finalize your selections and complete the NetCommand setup, select Finish from the Finish screen.

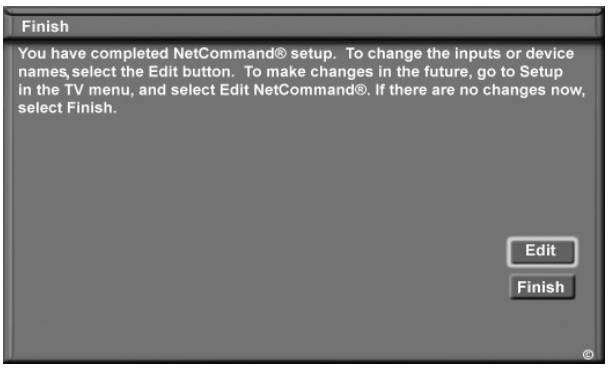

Finish
You have completed NetCommand® setup. To change the inputs or device names, select the Edit button. To make changes in the future, go to Setup in the TV menu, and select Edit NetCommand®. If there are no changes now, select Finish.
Edit
Finish

Figure 6. Finish screen

Adding IEEE 1394 Devices Automatically, continued

Compatible IEEE 1394 Devices

It is possible to connect devices to the TV that have IEEE 1394 connectors but are not compatible with the TV or with the NetCommand® control system. Areas of compatibility to consider are:

1. Digital Video Signals

The TV is able to decode MPEG2 video. Other types of digital video, such as DV video, provided by some camcorders, must be decoded by the source device and sent to the TV as analog video or S-Video. If the camcorder uses a compatible digital control system, the IEEE 1394 cable can still provide control for the camcorder while the TV is viewing the analog video or S-Video signals.

2. Digital Audio Signals

The TV is able to decode Dolby Digital signals and MPEG Audio signals. "Other" types of digital audio as provided by some digital recording devices,such as MP3 Audio and DTS Audio, cannot be decoded by the TV when received over IEEE 1394.

The TV may not be able to pass incompatible digital audio signals on the coaxial digital audio output, however these signals may pass on the IEEE 1394 cable to other devices.

3. Digital Control Signal

The TV is able to act as the control center for IEEE 1394 audio/video devices, such as VCRs, A/V Discs, tuners, cable boxes and amplifiers that are compatible with the following IEEE 1394 control standards.

- **EIA-775** is designed for tuning devices such as cable boxes allowing the device to send simple graphics. However, this standard does not allow the TV to control the cable box by IEEE 1394.

- **AV/C (Audio Video Control)** is designed to provide basic controls such as play, stop, channel selection and volume, as appropriate for the device. Some devices may have an on-screen display for these functions.

- **HAVi (Home Audio Video Interoperablity)** is designed to handle AV/C type of control. Some HAVi devices are able to "teach" the TV how to control more than basic functions, this allows the TV to control non-traditional devices or new types of devices not yet developed. The device will inform the TV what information and control buttons will be needed on device specific menus so the additional functions can be controlled. The ability to learn new menus from a HAVi device is only available on the following models: WS-55813, WS-65713, WS-65813 and WS-73713.

Some devices may be a combination of two or more types of devices. For example, there may be a recording device that is also a tuning device. Each portion of the device is called a sub-unit. When you select a device on the Device Selection menu that has sub-units, a pop-up menu will appear so you can select which sub-unit section you wish to use.

The TV is not able to control IEEE 1394 devices that use other types of control protocols. Incompatible digital audio, video and/or control information will still be able to pass from one device through the TV to another device on the network. These incompatible devices may not appear on the Device Selection menu or in the Review screen of the Edit NetCommand menu.

NetCommand Control of Digital Devices Using the "Learn" Feature.

Some IEEE 1394 devices such as cable boxes or satellite receivers will not have compatible digital control signals or require the use of the device's own remote control. Some of these IEEE 1394 devices will not display on-screen information through the IEEE 1394 connection and will require using an analog connection for on-screen displays. In many cases, to control these digital devices, the Learning feature of NetCommand can be used.

1. Place an IR Emitter for NetCommand in front of the device's remote control sensor (see IR Emitters, page 26).

2. On the Name for 1394 Device screen (Figure 2, page 46) check mark the Analog Connection check box.

3. Select the device type on the IEEE 1394 Device Type screen (Figure 3, page 47) of cable box, DBS or similar tuning device.

4. Select "Other" as a manufacturer and then highlight "Learn" and press ENT(er) on the Device screen (Figure 4, page 47).

5. Follow the device learning instructions found in Edit NetCommand section of Chapter 3.

6. The Connection screen (Figure 5, page 47) follows the learning screens. If analog connections are used, select the correct inputs. If analog connections are not used, uncheck the audio and video connections for both the TV and AVR inputs.

7. Proceed with the Finish screen.

This will allow NetCommand to use the learned remote control these IEEE 1394 devices.

Note: When using the NetCommand learning feature for IEEE 1394 devices that do not have analog connections, the GUIDE function will require pressing GUIDE twice. The first press of GUIDE will display the TV's digital channel guide. The second press will display the program guide for the device.

Chapter . . . 4

Device Selection

Device Selection Menu 50
PIP Device Selection Menu 51
Transport Menu 51
Channel Selection, Sleep Timer, Audio and Video Buttons 52
NetCommand Controlled Recordings 53

Device Selection Menu

When you press DEVICE on the TV's remote control, the Device Selection menu (Figure 1) displays. When NetCommand® has not been setup, the Device Selection menu allows you to select an input for viewing. When NetCommand is setup the Device Selection menu allows you to select the device for viewing, select audio from the TV speakers or A/V Receiver, power compatible devices On or Off, and verify the destination of signals.

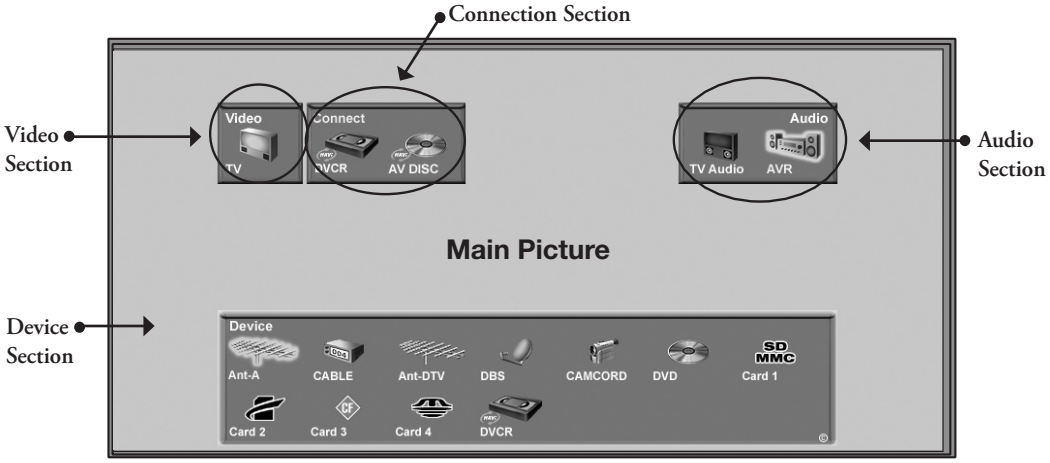


Figure 1. Device Selection Menu with NetCommand

Device Section

When the Device Section menu is displayed, the Device or Input you are currently viewing shows a gold-colored icon.

To select another device or input, press ADJUST ◀, ▶, ▲ or ▼ on the TV's remote to move the highlight among the devices. Press ENT(er) to select the device you would like to view and hear. The TV inputs are automatically changed. If NetCommand is set up, the inputs on compatible A/V Receivers are automatically changed at the same time.

Power On/Off Devices

Some devices will power On automatically when you select to use the device. These devices will power Off automatically when you turn Off the TV. For devices that do not power On or Off automatically display the Device Selection menu, ADJUST ◀ or ▶ to highlight the device icon and press POWER on the remote control. For the A/V Receiver, press AUDIO to move the navigation to the Audio Section. Highlight the A/V Receiver icon and press POWER. If you press POWER on the remote control when the Device Selection menu is not displayed, the TV will turn Off.

Video Section

The TV icon shows the destination for the device highlighted in the Device Section.

Connection Section

The Connection Section shows the other devices that are currently connected to the device highlighted in the Device Section.

For example, if the Digital VHS (D-VHS) is currently recording from Ant-DTV, when you move the highlight to the Ant-DTV icon, the D-VHS icon will appear in the Connection Section. This icon will disappear when you move the highlight to another icon.

Audio Section

When a NetCommand pre-memorized or learned IR controlled A/V Receiver, or HAVi amplifier has been connected to the TV and added to NetCommand Setup, an icon for this device will appear in the audio section. Press AUDIO to change navigation to the audio section. Then press ADJUST ◀, ▶, ▲ or ▼ to select the TV speakers icon or the A/V Receiver icon. Press ENT(er) to change the audio selection. Press DEVICE to return the navigation to the Device Section.

IMPORTANT

Only devices that were designed by their manufacturers to respond to separate On and Off remote control signals will be able to turn On automatically. Not all manufacturers provide this ability for their products.

PIP Device Selection Menu, Displaying and Using the Transport Menu

PIP Device Selection Menu

Figure 2

When you press the PIP DEVICE button on the remote control, the PIP Selection menu displays. The PIP Selection menu is similar to the Device Selection menu except the source for the Video Section is the sub picture and the Audio and Connection Sections are not displayed.

Use the ADJUST ◀, ▶, ▲ or ▼ to move the yellow highlight to the Device you want to show in the PIP or POP image then Press ENT(er). Device icons that are grayed out are not available for use as PIP/POP sources or with the current source.

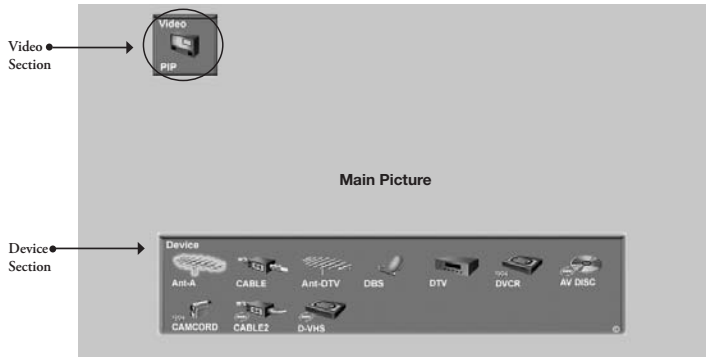


Figure 2. PIP Device Selection Menu

Displaying the Transport Menu

Figure 3

Selecting a VCR or DVD Player from the Device Selection menu will automatically display the Transport menu. This menu is also displayed when one of the transport buttons on the remote control is pressed while viewing these devices. You can re-display this menu by pressing DEVICE MENU.

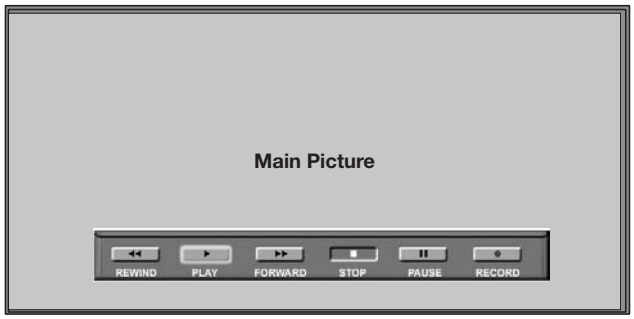


Figure 3. Transport Menu

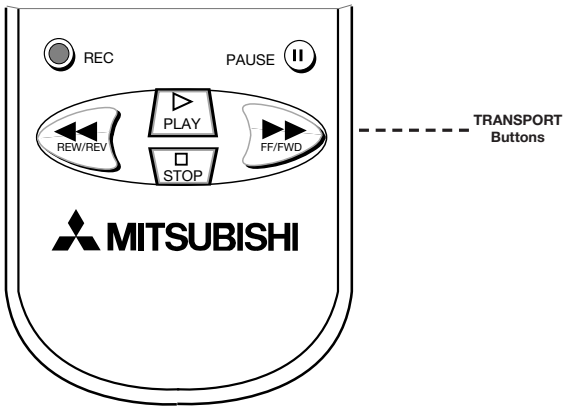
Using the Transport Menu

When the Transport menu is displayed, you can select transport functions on the menu by pressing ADJUST ◀ , ▶, ▲ or ▼ and then selecting the function by pressing ENT(er). For example, if you want to pause playback, press ADJUST ◀ or ▶ to scroll over to PAUSE. Then press ENT(er) to pause.

To directly access a transport function, without using ADJUST and ENT(er), you may press the desired function button on the remote control.

Please note that if a function is not possible, such as record for a DVD Player, the Transport menu button will be grayed out.

You can turn off the automatic display of the transport menu in the Setup menu of the TV. The Setup menu is explained in the next chapter. When turned off, the transport menu will not be displayed when you select VCR or DVD Player on the Device Selection menu, or press a transport button, or DEVICE MENU. However, even when the Transport menu is turned off, you can continue to operate the Transport functions of NetCommand® devices by pressing the transport control buttons on the remote control.



Channel Selection, Sleep Timer, Audio and Video Buttons

Channel Selection

For Antenna-A or Antenna-B channels:

1. Enter three numbers (for channel 2, press 002).

2. Press the channel number and ENT(er). Example: for channel 2, press 2, then ENT(er).

3. Enter the channel number and wait four seconds. The TV will change automatically.

For Antenna DTV Channels (When Antenna DTV is the current device):

1. Enter two or three numbers for the major channel number. If three numbers are pressed, the separator is automatically added and you may proceed to step 2. If two numbers are pressed, you must add the separator by pressing the CANCEL button on the remote control. Wait 4 seconds, the last subchannel will display.

2. a) Enter a 1-digit sub-channel number and wait four seconds, or

b) enter a 1-digit sub-channel number and press ENT(er), or

c) enter 2 digits for this sub-channel and the TV will automatically switch channels.

Sleep Timer

Setting the Sleep Timer:

1. Press SLEEP on the remote control.

Note: A message indicating the length of time the sleep timer is to be set for is displayed on the TV screen.

2. Each press of SLEEP increases the time displayed by 30 minutes, until the maximum value of 120 minutes is reached.

3. After 5 seconds of inactivity, the message will disappear.

4. Press SLEEP to view the remaining time before the timer turns the TV off.

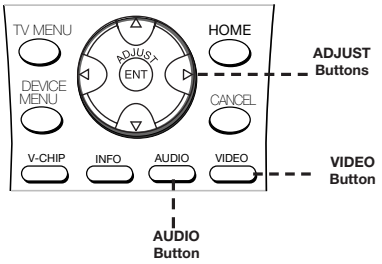
Canceling the Sleep Timer:

1. Press SLEEP to display the on-screen message.

2. Press SLEEP repeatedly until OFF is displayed.

Note: After 5 seconds of inactivity, the message box disappears.

Using the AUDIO and VIDEO Buttons on the Remote Control



You may adjust Audio or Video setting directly without using the TV Main menu.

1. Press AUDIO or VIDEO button to cycle through the available settings.

2. Press ADJUST ◀ or ▶ to adjust the setting. After 5 seconds of inactivity, the setting display will disappear.

Detailed information regarding Audio and Video settings is found on pages 67-69.

NetCommand® Controlled Recordings

Record To Setup

Figure 4

Your TV is able to start and stop recordings automatically and send the signals from one external playback device to another external recording device. It is also able to convert digital signals from Antenna DTV and from IEEE 1394 devices to analog signals that can be recorded on NetCommand compatible analog VHS and S-VHS VCRs. You cannot record from an analog device such as Antenna A, Antenna B or a VHS or S-VHS VCR to a digital recording device such as a D-VHS VCR or A/V Disc.

You can schedule the recording to take place at a later time and program the recording duration, in 30 minute increments, to last from 30 minutes to 6 hours.

When a digital recording is being made, the TV will direct the signals to the recording device using the IEEE 1394 cable. During the recording the TV is able to watch any analog source or can be turned off.

When an analog recording is being made, the TV will direct signals to the recording device using the stereo's left and right audio for Audio Video 1 of Monitor Output.

During the analog recording, the TV can be powered Off. If the TV is powered On, it must be tuned to the source that is being recorded.

If the Monitor outputs are sent through the A/V Receiver to a recording device, then the A/V Receiver must be turned on and set to the TV input.

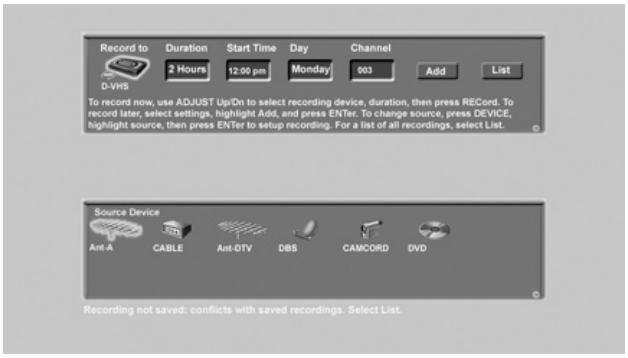


Figure 4. Record to screen

Recording Now

While viewing Antenna A, Antenna B, Antenna DTV, an IEEE 1394 device, or a non-recording traditional device, you can start recording now.

To initiate recording now:

1. Press REC (record) on the TV remote.
2. Press DEVICE on the remote control to select the source device choices that you can record from.
3. Press ADJUST ◀ or ▶ to select the source device you will record from.
4. Press ENT(er) to confirm selection and return to the "Record to" section.
5. In the "Record to" section, review the destination device (VCR1) and duration. Change if necessary.
6. Press REC a second time to initiate recording.

Time-Delayed Recording

To initiate a time-delayed recording:

1. Press REC (record) on the TV remote.
2. Press DEVICE on the remote control to move to the Source Device section.
3. Press ADJUST ◀ or ▶ to select the source device you will record from.
4. Press ENT(er) to confirm your Record from selection and move to the Record to section.
5. Press ADJUST ◀ or ▶ to select the Record to device, duration time, start time (press ENT(er) after selecting hour, minutes and am or pm to set the time) and day. For devices that can select channels, select the channel.
6. Select Add and press ENT(er) to add the recording to the record list. If your selection is successful a confirmation message will be displayed. If you pick overlapping times, day(s), or destination devices, you will see a message stating there is a conflict.
7. To exit, press HOME on the TV remote after all recordings have been added.

Record List Screen

Figure 5

To view a list of all of your currently programmed recordings, select List from the Record List screen. A maximum of 32 recordings can be scheduled. To cancel a recording on the Record List, press ADJUST ▲ or ▼ to select the recording, then press CANCEL. To page through the list, press CH ▲ or ▼.

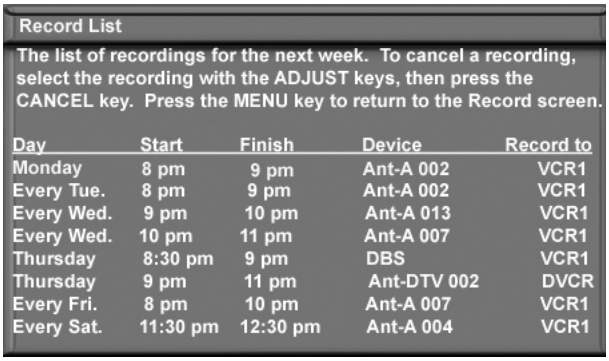

Record List
The list of recordings for the next week. To cancel a recording, select the recording with the ADJUST keys, then press the CANCEL key. Press the MENU key to return to the Record screen.
Day Start Finish Device Record to
Monday 8 pm 9 pm Ant-A 002 VCR1
Every Tue. 8 pm 9 pm Ant-A 002 VCR1
Every Wed. 9 pm 10 pm Ant-A 013 VCR1
Every Wed. 10 pm 11 pm Ant-A 007 VCR1
Thursday 8:30 pm 9 pm DBS VCR1
Thursday 9 pm 11 pm Ant-DTV 002 DVCR
Every Fri. 8 pm 10 pm Ant-A 007 VCR1
Every Sat. 11:30 pm 12:30 pm Ant-A 004 VCR1

Figure 5 Record List screen

Cancel Current Recordings

To cancel a recording in progress, press DEVICE to display the Device Selection menu and highlight the source of the recording. Confirm that the icon for VCR (or recording device) is in the Connection Section next to the TV icon. Press the CANCEL button. The icon for the VCR (or recording device) will disappear from the Connection Section to confirm the cancellation.

Copy-Protected Material

When attempting to record copy-protected material, the Record functions of the NetCommand and IEEE 1394 systems may be prevented or stopped.

If one of the sub-channels in a bitstream is copy-protected, then the entire bitstream, that is, all programs for that bitstream or channel, are similarly copy-protected. If you have a recording that is tagged “Record Once”, NetCommand will change the tag to “Record No More”.

Restrictions for Traditional VCRs

If turned On, the TV must be tuned to the source device.

- Either your VCR must be connected directly to Audio Video 1 or, if the A/V Receiver is connected to Audio Video 1, then the VCR must be connected to the record outputs on the A/V Receiver.
- The VCR must be set manually to “line input”. Display the Device Selection menu, highlight the VCR and press GUIDE to change VCR inputs.
- If an A/V Receiver is connected to Audio Video 1, the A/V Receiver must be turned on.
- To record directly from antenna or cable, connect the TV “Loop Out” to the VCR “Antenna In.”
- The TV can select channels on compatible cable boxes for recordings. Leave the cable box turned on.
- If the source device, recording device or A/V Receiver does not have separate power On and Off features, then leave that device powered On.

Chapter . . . 5

TV Menu Screen Operations

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Main Menu Choices

Setup

Figure 1

Add, change, review or delete NetCommand® settings and devices. You can also change the order of icons displayed on the Device Selection menu, select energy mode, turn on or off the transport menu, and select English or Spanish as the language for the menus and on-screen displays.

Figure 1. Main menu, Setup selected

Antenna

Figure 2

Memorize locally available channels for Ant-A, Ant-B and Ant-DTV. You can manually add or delete channels from memory, name channels for Ant-A and Ant-B, or add your favorite channels to a SQV (SuperQuickView™) list.

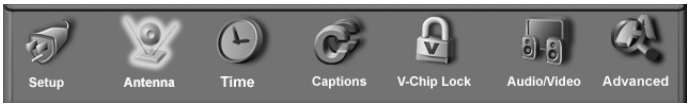

Figure 2. Main menu, Antenna selected

Time

Figure 3

Manually set the time for the TV, or select Auto and the TV will automatically set the time based upon Extended Data Service (XDS) time data. This time data is usually broadcast by your local PBS station. This menu is also used to set the TV timer.

Figure 3. Main menu, Time selected

Captions

Figure 4

Display Closed Captions if sent by the broadcaster, select settings for analog or digital captions. Automatically displays the Digital Channel Guide as the channels are changed, when tuned to Antenna DTV.

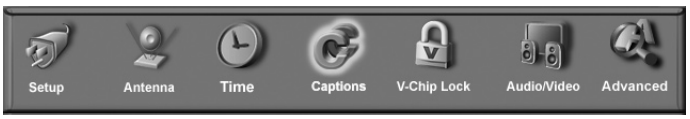

Figure 4. Main menu, Captions selected

V-Chip Lock

Figure 5

Block or allow programing based upon rating signals sent by the broadcast station, lock by time, or disable or re-enable the front panel buttons.

Figure 5. Main menu, V-Chip Lock selected

Audio/Video

Figure 6

The Audio Video Menu allows you to use the A/V Memory Reset to return A/V settings to the original factory settings for a selected device. You can also adjust some or all of the A/V settings, display a blue screen when viewing a device with no signal, enhance the darker parts of bright pictures or turn the TV speakers On or Off. Select Main Audio or PIP Audio as the source for Audio 2 output.

Figure 6. Main menu, Audio/Video selected

Advanced

Figure 7

Align the focus (convergence) of the TV's projected light beams or reset the focus to the factory default settings.

Adjust Color Balance Automatically or manually (PerfectColor™). Color Balance uses six colors, Magenta, Red, Yellow, Green, Cyan and Blue to obtain color balance. Reset the Color Balance to the factory default settings.

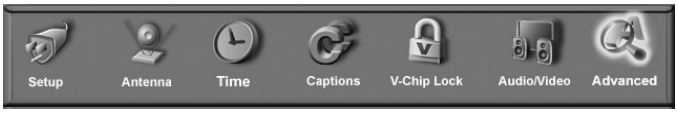

Figure 7. Main menu, Advanced selected

Setup Menu

Setup Menu

Figure 8

Select Setup to perform the functions listed below.

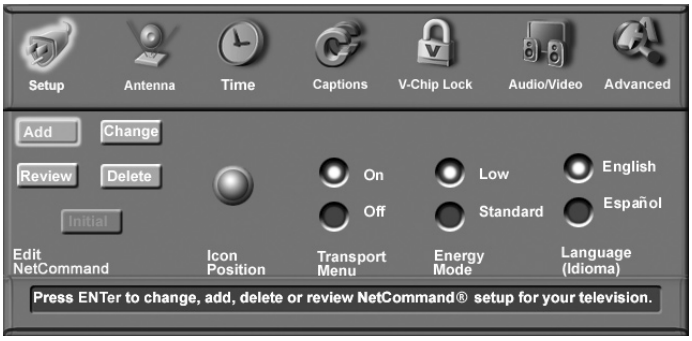

Figure 8. Setup Menu, NetCommand Option

Edit NetCommand®

Detailed information regarding Edit NetCommand is found in Chapter 3. The functions of Edit NetCommand are:

- ADD - Addition of new devices.
- CHANGE - Change or edit traditional devices and IEEE 1394 devices.
- DELETE - Delete a single device or delete the entire setup configuration. After deleting, you will be able to start with the Initial NetCommand screen.
- REVIEW - Review all devices connected to the TV, including IEEE 1394 devices, and turn devices and unused inputs On or Off.
- INITIAL - Allows initial setup, in the event NetCommand setup was cancelled or if the entire configuration was deleted or not completed.

Icon Position

Selecting the Icon Position screen allows you to arrange the device icon order on the Device Selection menu to your preferred sequence to make the operation of the TV easier.

Press ADJUST ▲ ,▼ ,◀, or ▶ to highlight the icon to be moved and then press ENT(er). Press ADJUST ▲ ,▼ , ◀ or ▶ to move the icon to the desired position and then press ENT(er) to secure the icon in the new position.

Transport Menu

The Transport Menu is used by NetCommand® to control VCRs, DVDs, IEEE 1394 AV Disc, digital VCRs, and similar devices. This menu can be turned off if you would rather not have it displayed. The transport buttons on the remote control will continue to operate these devices.

Energy Mode

This feature allows you to save electrical energy when the TV is off and in the standby mode. Standard mode uses more power but allows all of the background features to continue to operate. Low mode saves power (using less than 2 watts), however, using this selection will restrict or turn off many of the background features.

If the Energy Mode is set to Low the following features of the TV will be restricted or unavailable when the TV is turned off (Note: The features will operate normally when the TV is powered On):

- TV controlled recordings, including “Record Later “ recordings will not be possible.
- TV Time (clock) will be lost after approximately 48 hours. The clock will need to be reset through the Time menu.
- The Timer function cannot be used to turn on the TV.
- IEEE 1394 functions that pass through the TV or IEEE 1394 recordings from the TV or Ant-DTV will not be possible.
- The amount of time required to turn on the TV will increase to more than one minute.

Language

Display the on-screen menus in either English or Spanish (Español). The first time you powered On your TV, you were requested to select an on-screen menu language. If you choose to change the selection, all menu text will immediately switch to the language of your choice.

Antenna Menu: Antenna, Memorize Channels, Channel, Memory and Name

Antenna Menu

The following Antenna Menu options are available for use on Antenna A, Antenna B or Antenna DTV. You can memorize channels, add or delete channels, and add channels to an SQV (Super Quick View™) list. For Antenna A and Anenna B, you can name channels.

Antenna Menu

Figure 9
Select Antenna to perform the functions listed below.

Figure 9. Antenna Menu

Memorize

For Antenna A or Antenna B
Select either Air (when used with an indoor/outdoor antenna) or Cable (when used with direct cable) then press ENT(er) to start the automatic channel memorization process.

For Antenna DTV
Select Air when used with an indoor/outdoor antenna. Select Cable or Cable (HRC) when used with Direct cable.

There are three types of Cable systems: Standard, IRC and HRC. To memorize Standard or IRC, select Cable; to memorize HRC, select Cable (HRC).

Check with your Cable company to determine which type of Cable system they use. If your cable company cannot advise you, select Cable.

To stop the automatic channel memorization process, press CANCEL. Channels memorized before you pressed CANCEL are retained in memory.

After memorizing channels, the channels in the memory can be accessed in ascending or descending order or by pressing CH ▲ or ▼.

Channel

For additional Channel editing, press ADJUST ▲ or ▼ to select the channel or press CH ▲ or ▼ for channels already in memory.

On Antenna DTV, when the broadcaster has sent a virtual channel number, the virtual channel number is shown in the text box and the original digital channel is shown below on-screen, as a reference.

Memory

After the available channels have been memorized with *Memorize*, weaker channels viewed with Antenna A or Antenna B can be added. Unwanted channels for Antenna A, Antenna B, or Antenna DTV can also be deleted. Press CH ▲ or ▼ on the remote control to see the channels in memory. Press ADJUST ▲ or ▼ to select Added or Deleted for the channel shown in the Channel number box.

Name

Channels shown on Antenna A or Antenna B can be named (up to four characters). After you enter a name, it will appear on the TV screen, next to the channel number.

1. Press ADJUST ▲ or ▼ to select each letter.

2. Press ENT(er) to set the letter and move to the next letter position.

3. Press CANCEL to move back one position.

Channels on Antenna DTV are automatically named, if the broadcaster sends the information

Antenna Menu: SuperQuickView™ (SQV)

SQV (SuperQuickView™)

Using The Menu Screen

Figure 10

SQV (*SuperQuickView*™) allows you to put together lists of your favorite channels from Antenna A, Antenna B and Antenna DTV. You can store channels in any of the 9 different SQV memory banks. You can also store the same channel in multiple memory banks. Once you have added a channel to an SQV memory, "SQV" and the memory bank number will appear under the tuned channel number on the TV screen.

Adding SQV Channels

1. Select the channel using the "Channel" option box or press CH ▲ or ▼.

2. Highlight the bank (SQV1-SQV9).

3. Press ENT(er) to check mark the selected SQV memory bank.

4. Repeat for additional channels or banks.

Removing SQV Channels

1. Highlight the box for the SQV bank number.

2. Press ENT(er) to remove the check mark.

Figure 10. Antenna Menu, SQV (SuperQuickView)

SQV (SuperQuickView™)

Using The Remote Control

Viewing and changing SQV banks using the remote control:

1. Press the SQV button.

2. To change memory banks, press a number button within 5 seconds of pressing the SQV button.

3. Press the SQV button repeatedly to cycle through the channels available in that bank.

Adding SQV channels using the remote control:

1. Press CH ▲, ▼ or number buttons to select the channel you want to add to the current SQV memory bank.

2. Press and hold the SQV button for about 2 seconds. When "SQV" and the memory bank number appear under the channel number, the channel has successfully been added.

Removing SQV channels using the remote control:

1. Press the SQV button and then the memory bank number.

2. Press the SQV button repeatedly until you see the desired channel.

3. While the channel number and SQV indicator (with correct bank number) are still displayed on the screen, press the CANCEL button. If the CANCEL button is not pressed before the SQV indicator disappears automatically, the channel will not be removed.

4. When the SQV indicator disappears, the channel has successfully been removed only from that bank. "Other" banks remain unchanged.

Time Menu: Setting the Clock, Manual or Auto

Time Menu

Select Time to perform the functions listed below.

Setting the Clock (Manual)

Figure 11

For the manual clock setting, select the current time, including AM or PM and the day. Hours and minutes are set separately.

Figure 11. Time Menu, Manual Clock Setting

Set Time

When Manual has been selected for the clock setting, you need to set the time.

Press ADJUST ▲ or ▼ to slowly select the hour or press and hold ADJUST ▲ or ▼ to quickly select the hour. Press ENT(er) to confirm the hour.

Then press ADJUST ▶ to move to the minutes options and press ADJUST ▲ or ▼ to select minutes then press ENT(er) to confirm. You may then press ADJUST ▶ to select AM or PM and ENT(er) to confirm.

Set Day

When Manual has been selected for the Clock Setting, you need to select the current day of the week. Press ADJUST ▲ or ▼ to select the correct day.

Setting the Clock (Auto)

Figure 12

The Clock Setting (Auto) will automatically set the day and time using Extended Data Service (XDS) time data. This data is automatically retrieved from a PBS channel or other channel carrying this service when received on Ant-A or Ant-B. Be aware that some channels may send incorrect time information, this is not a defect in the TV.

Figure 12. Time Menu, Auto Clock Setting

Time Zone

When Auto has been selected for the Clock Setting, you need to select the correct time zone. Press ADJUST ▲ or ▼ to select the time zone (Atlantic, Eastern, Central, Mountain, Pacific, Alaska or Hawaii) for your area. Then press ADJUST ▶ to move to the Daylight Savings Time option.

Daylight Savings Time

When Auto has been selected for the Clock Setting, you need to select the Daylight Savings Time (DST) option that your state uses. Press ADJUST ▲ or ▼ to select Applies if your state or area uses DST, or Ignore if your state or area does not use DST.

The clock time and day will be set automatically after tuning to a channel carrying the Extended Data Service (XDS) time data (usually your local PBS channel).

Time Menu: Setting The Timer

Timer On/Off

Figure 13

The timer can be turned to On or Off. When On, you need to select the time to turn On, the day to turn On, the device and the channel to display. At your preselected time, the timer will turn the TV On, and this message will be displayed: “Press a button for the TV to stay on”. Any button on the remote control must be pressed within 5 minutes, or the TV will turn itself Off.

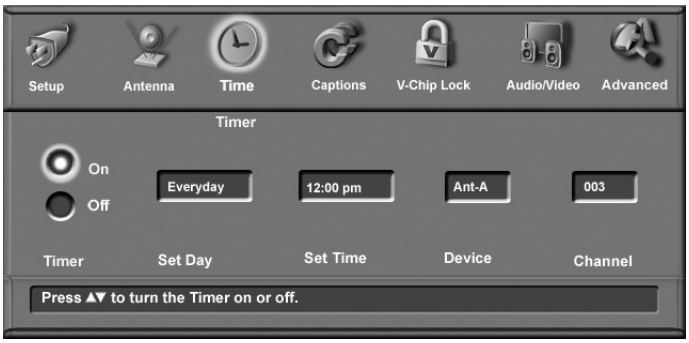

Figure 13. Time Menu (Timer On/Off)

Set Time

Select the hour and minute, including AM or PM, when the TV is to turn on. Press ADJUST ▲ or ▼ to slowly adjust the time. Press and hold ADJUST ▲ or ▼ to quickly adjust the time. The hours and minutes are set separately.

Set Day

Select the day or days that the TV will turn on automatically. Press ADJUST ▲ or ▼ to select Everyday, Mon-Fri (Monday through Friday), or the individual days of the week.

Device

Press ADJUST ▲ or ▼ to select the device to use when the timer turns on the TV. If the TV is already on, the timer will turn the TV to this selected device.

Channel

When Antenna A, Antenna B, or Antenna DTV is the selected device, you may select any memorized channel. Press ADJUST ▲ or ▼ to select the channel and the TV will tune to this channel in memory when the timer turns it on. This includes sub-channels for Antenna DTV.

Captions Menu: Analog and Digital Captions

Captions Menu

Figure 14

Select Captions to perform the functions listed below. For analog channels (Antenna A or Antenna B), broadcasters can send either Standard or Text closed captioning. Standard Closed Captions follows the dialogue of the characters on-screen and displays in a small section of the screen. Text Closed Captions often contain information such as weather or news and covers a large portion of the screen.

On digital channels (Antenna DTV) broadcasters can send up to 6 different captioning selections. Each TV station may broadcast only one or two types of captions or none at all. The TV cannot decode Closed Captions received on Component 1 or 2 inputs, Input-DTV or MonitorLink.

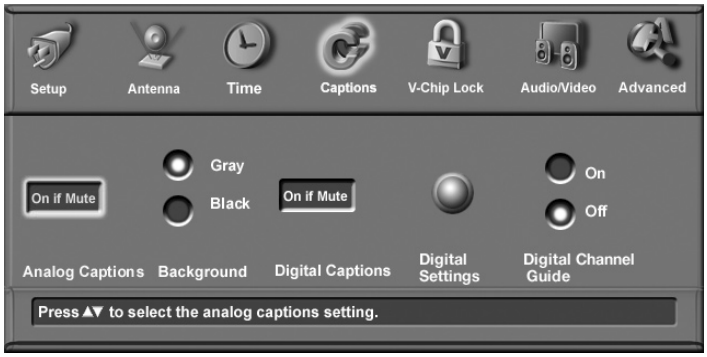

Figure 14. Captions Menu

Analog Captions

The TV can display one of the following captions for Analog sources:

- **CC1, CC2, CC3, or CC4.** (Standard closed captioning signals).
- **Text1, Text2, Text3, or Text4.** (Text closed captioning signals).
- **On if mute. Closed captions when mute.** When selected, the standard closed captioning signal (CC1)will turn on/off by pressing MUTE on the TV remote control.
- **Off.** No closed captions.

IMPORTANT

When analog text closed captioning is selected, a large black or gray box appears on your TV screen if no signal is broadcast.

Background

To make the analog closed captions easier to read, you can choose to display the background color as either black or gray behind the captions. If you use Closed Captions frequently, Mitsubishi recommends gray for the background to reduce uneven aging of the picture tubes.

Note: See page 72 for information concerning uneven aging of picture tubes.

Digital Captions

The TV can display one of the following Captions for Digital sources:

- **Captions 1-6.** Sent by broadcaster.
- **On if Mute.** Closed captions when mute. When selected, the captioning signal (Caption 1) will turn on/off by pressing MUTE on the TV remote control.
- **Off**. No closed captions.

Note: If the broadcaster is only sending analog captions converted to digital, then the analog captions settings apply.

Digital Settings

The Closed Captions provider selects Default options when sending digital closed captions. You may, however, select Custom option to customize the appearance. Digital settings do not apply to analog closed captions converted to digital.

Digital Channel Guide

Select On to display the Digital Channel Guide automatically when changing channels and while viewing Ant-DTV. The Digital Channel Guide lists the channel and sub-channels, channel name and program title. The information is provided by the broadcaster, and may not be available for all channels.

IMPORTANT

The content of captions is determined by the broadcaster. If your captions show strange characters, misspellings or odd grammar, it is not a malfunction of the TV.

Captions Menu: Digital Captions Settings

Appearance

Figure 15

Closed Captions provider selects the Default options when sending digital closed captions. You may, however, select the Custom option to override and customize Closed Captions appearance. These settings do not apply to analog Closed Captioning converted to digital.

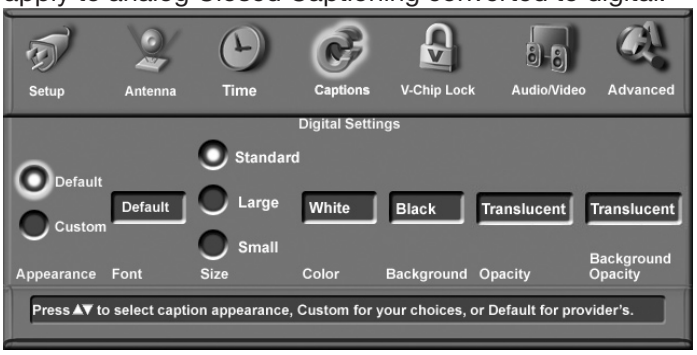

Figure 15. Closed Captions Menu Appearance

Fonts

You can customize the text of digital captions by selecting the font of your choice. The available Font options are as follows:

- Default - Selected by the Closed Captions provider
- Font 1 - Monospaced font with Serifs
- Font 2 - Proportional spaced font with Serifs
- Font 3 - Monospaced font without Serifs
- Font 4 - Proportionally spaced without Serif
- Font 5 - Casual font
- Font 6 - Cursive font
- Font 7 - Small Capitals font

Size

You can also customize the text of digital captions by selecting your desired size of font. Large is the recommended font size.

Color

You can customize the text of digital captions by selecting the color of font. The available font colors are as follows:

- White
- Black
- Magenta
- Red
- Yellow
- Green
- Cyan
- Blue

Background

To make the digital closed captions easier to read, you can choose the background color. The available background colors are as follows:

- White
- Black
- Magenta
- Red
- Yellow
- Green
- Cyan
- Blue

NOTE: If you choose the same color for the fonts and background, Closed Captions will not be visible.

Opacity (Font)

You can customize the visibility of your fonts using the following categories:

- Transparent - See-through text to the TV program
- Translucent - TV program is visible behind the text
- Opaque - Solid color text; blocks the TV program
- Flashing - Text flashing in intervals

Background Opacity

You can customize the background for digital captions using the following categories:

- Transparent - See-through background to the TV program
- Translucent - TV program is visible behind the background
- Opaque - Solid background; blocks TV program
- Flashing - Background flashing in intervals

IMPORTANT

We recommend you use contrasting colors between captions and background. In particular, Black background with translucent opacity and White font are ideal.

Care must be exercised when selecting customized colors, your choice may change the legibility or readability of captions.

V-Chip Lock Menu: Passcode

V-Chip

Select V-Chip Lock to perform the functions listed below. V-Chip allows you to Block or Allow programs based upon rating signals sent by the broadcaster. The TV comes from the factory with the V-Chip Lock in the Off setting.

You can turn the V-Chip on within the V-Chip Menu or you can use the V-CHIP button on the remote control to conveniently turn the V-CHIP on or off.

The factory preset is TV-PG for TV ratings or PG for movie ratings, allowing only programs rated TV-PG/PG or lower. You can change the blocking level to various TV ratings and lettered categories or movie ratings. After changing channels or devices, there may be up to a 5 second delay before the V-Chip lock takes effect.

IMPORTANT

If you forget your four-digit Passcode, see Appendix A.

Entry

Figures 16 and 17

You will see the screen shown in Figure 16 when you press V-CHIP on the remote control, or the first time you select the V-Chip Lock menu, or after you have canceled your passcode. To use the Lock, input a four-digit passcode with the number buttons on the remote control, then press ENT(er). You can delete a number and move back one space by pressing CANCEL. You can exit without inputting a passcode by pressing MENU or HOME.

After setting a passcode, the V-Chip Lock is active. The next time you select V-Chip Lock you will see "...enter your passcode" instead of "...enter a new passcode".

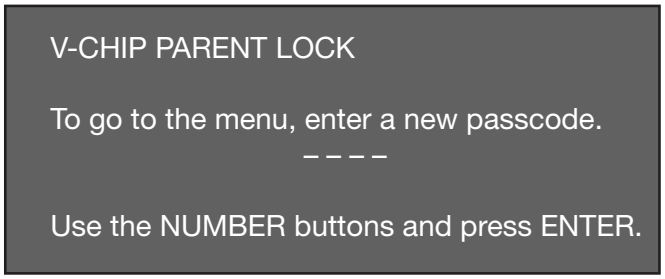

Figure 16. V-Chip Entry screen

To view a V-Chip blocked program or to watch the program during a scheduled lock time, you must enter your 4-digit passcode or change the channel to an unlocked program. Once you have entered the passcode, the V-Chip block or Lock by Time will remain released until the TV is powered Off and then On again.

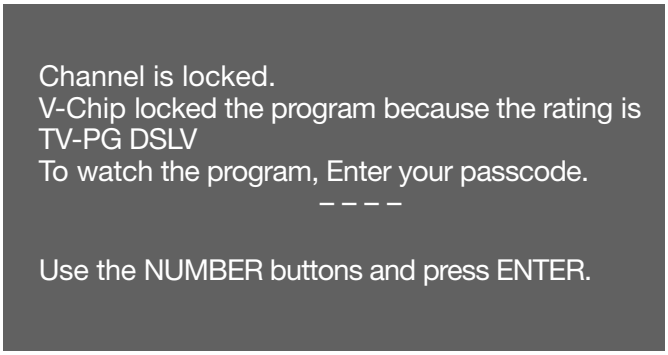
Channel is locked.
V-Chip locked the program because the rating is TV-PG DSLV
To watch the program, Enter your passcode.
– – – –
Use the NUMBER buttons and press ENTER.

Figure 17. V-Chip Passcode screen

V-Chip Start Time and V-Chip Stop Time

Figure 18

Select the times you would like the V-Chip to be active. By setting the V-Chip Start Time and V-Chip Stop Time to the same time, the V-Chip will be active 24 hours a day.

Press ADJUST ▲ or ▼ to slowly select the time, starting with the hours. Press and hold ADJUST ▲ or ▼ to quickly select the hours, press ADJUST ▶ to select the minutes.

Figure 18. V-Chip Menu, Start & Stop Time

V-Chip Lock Menu: V-Chip Definitions

V-Chip Signal Information

When provided by the broadcaster, V-Chip ratings can be used to control which programs can be viewed or will be blocked. When V-Chip ratings are sent, you will see the ratings when you change the channel or when you press the INFO button on the remote control. Both TV and Movie ratings will display. TV ratings apply to programs and movies developed for TV and may have supplemental blocking by content categories. Movie ratings use MPAA ratings for movies released in theaters.

V-CHIP EXCEPTIONS:

1. ***V-Chip is effective only for programs viewed on Ant-A, Ant-B, Ant-DTV or from devices connected to inputs 1-3 or IEEE 1394 devices. It is not effective for programs viewed on devices connected to Component input, Inp-DTV or MonitorLink™.***
2. ***Videotapes, laser discs and DVDs may not contain V-Chip rating signals. If they don't contain the V-Chip signal, V-Chip cannot block the program or movie.***
3. ***Broadcasters are not currently required to include V-Chip rating signals at this time. If the broadcaster does not include the V-Chip rating signal, V-Chip cannot block the program.***

TV Ratings:

Used with TV programs and Made-for-TV movies.

TV-Y Youth, for children under the age of 7.
TV-Y7 Youth, 7 years old and older. For children 7 years old and older.
TV-G General Audience. For the entire family to view.
TV-PG Parental Guidance. Parental Guidance is recommended, may not be suitable for some children.
TV-14 Adolescent 14 years old and older. Not recommended for children under the age of 14.
TV-MA Mature Audience. For adults only.

TV Rating	FV	D	L	S	V
TV-Y					
TV-Y7	X				
TV-PG		X	X	X	X
TV-14		X	X	X	X
TV-MA			X	X	X

Content Categories:

Used in association with the TV ratings above.

FV Fantasy Violence- applies to TV-Y7 only.
D Sexual Dialog- applies in different degrees to TV-PG and TV-14.
L Adult Language-applies in different degrees to TV-PG, TV-14, and TV-MA.
S Sexual Situations- applies in different degrees to TV-PG, TV-14, and TV-MA
V Violence (graphic or realistic)- applies in different degrees to TV-PG, TV-14, and TV-MA.

When you select a TV rating, you are selecting the least-restricted program level that can be viewed. As an example, if you select TV-PG, you are allowing programs rated TV-Y, TV-Y7, TV-G and TV-PG to be seen and blocking programs rated TV-14 and TV-MA. When you select a TV Content category, you will block all TV programs that have the same content category listing. As an example, if you select to block V (Violence) at the TV-14 level, you will also block any program that has the V category listing at the TV-PG rating level as well.

Movie Ratings:

Used with theater released movies and direct-to-video movies.

G General Audience- Designed for the entire family to view.
PG Parental Guidance- Parental Guidance is recommended, may not be suitable for some children.
PG-13 Parental Guidance 13 years old and older- Not recommended for children under the age of 13.
R Restricted- Restricted in the theater to 17 years old and older unless accompanied by an adult.
NC-17 No Children- Restricted in the theater to 18 years old and older.
X Adult- Designed for and restricted in the theater to adult audiences only.

When you select a Movie rating, you are selecting the least restricted program level that can be viewed. As an example, if you select a movie rating of PG-13, you are allowing movies rated G, PG and PG-13 to be seen and blocking movies rated R, NC-17, and X.

Programs Not Rated: Used for programs that are not rated like news, sports, weather, emergency bulletins, or movies such as those prior to or without MPAA Ratings. This does not include programs without V-Chip signals.

IMPORTANT

If you select to block programs that carry the V-Chip rating "Programs Not Rated," you may block News or Emergency Bulletins, when ""None"" or "NR" Not Rated V-Chip rating is included. Care should be used when blocking programming that is not rated.

V-Chip Menu: Lock By Time and Front Button Lock

Lock By Time

Figure 19

LOCK BY TIME will allow you to lock the entire TV during specific hours. During the Lock Time, you must use your passcode to view the TV.

1. Use ADJUST ▲ or ▼ to select ON or OFF then use ADJUST ▶ to move to the Lock Time box.

2. Use ADJUST ◀ or ▶ to select Lock Time.

3. Use ADJUST ▲ or ▼ to select the time the lock will start.

4. Then use ADJUST ▶ to move to the Unlock Time option box.

5. Use ADJUST ▲ or ▼ to select the time the lock will end.

Setting the Lock Time and Unlock Time to the same time will make the Lock by Time active 24 hours a day.

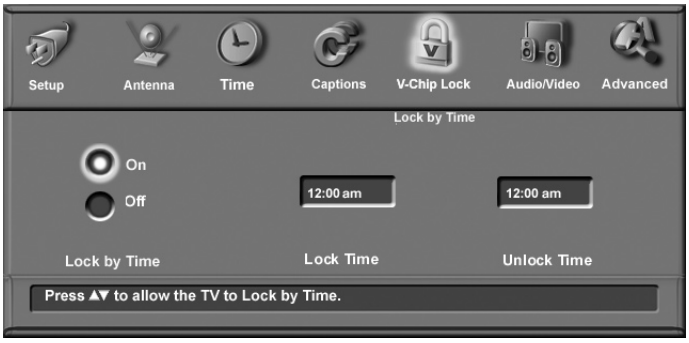

Figure 19. V-Chip Menu, Lock by Time

Front Button Lock

Figure 20

Front Button Lock lets you disable controls on the front panel to prevent anyone from changing settings by accident.

Select ON to lock out the operations of the front panel button and select OFF to restore the operations of the front panel buttons.

If the front panel buttons have been locked and you misplaced the remote control, you can restore the function of the front panel buttons by pressing and holding the MENU button on the front panel for more than 8 seconds. If the TV is already on, a message will be displayed to confirm the release of the Front Button Lock.

If the TV is in Low Energy mode, to restore the function of the front panel buttons, press Power on the front panel. After the TV is on, then press the MENU button on the front panel for more than 8 seconds.

Figure 20. V-Chip Menu, Front Button Lock

A/V Settings Menu: Memory Reset, Settings, Video Mute, Black Enhancement, TV Speakers, Audio 2 Out

Audio/Video

Figure 21

Select Audio/Video to perform the functions listed below.

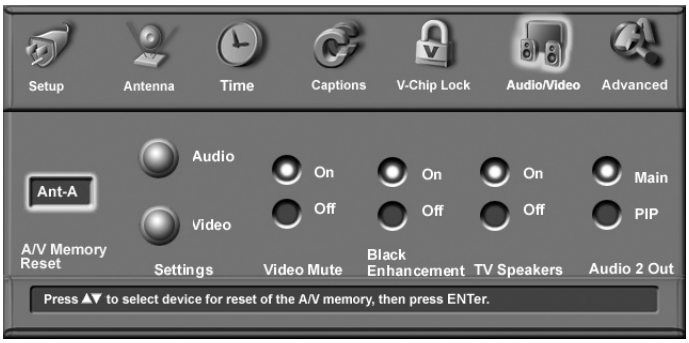

Figure 21. Audio/Video Menu, Settings

A/V Memory Reset

A/V Memory Reset allows you to select the device which will have the A/V Settings returned to the original factory settings. To return a device's memory to the original factory settings, select the device and then press ENT(er).

Audio/Video Settings

Each device has its own A/V memory. Select the device in A/V Memory Reset then select Audio or Video to adjust the device's individual settings. Press ENT(er), and the menu is removed and the individual settings are displayed.

Use ADJUST ▲ or ▼ to select the individual settings to be adjusted. Use ADJUST ◀ or ▶ to make the adjustment. For descriptions of the individual A/V settings see A/V Setting Descriptions, pages 68 and 69.

Video Mute

Video Mute lets you display a blue background when no signal is being received on Inputs 1-3.

Black Enhancement

The contrast in dark scenes is enhanced for better picture quality. Brighter scenes will not be affected.

TV Speakers

This selection will turn on or off the TV's internal speakers. You may select Off when sending the sound through a separate stereo system or surround sound A/V receiver.

When NetCommand® is enabled, selecting the A/V Receiver icon from the Device Selection menu automatically turns Off the TV speakers. See the NetCommand information for further instructions.

Audio 2 Out

Audio 2 Out allows you to listen to the audio from either the Main screen or the live PIP screen.

If you selected Audio 2 Out as the A/V Receiver source in the NetCommand Setup Wizard, then you will only be able to listen to the Main screen's audio.

Select Monitor Out to Audio/Video 1 in Edit NetCommand to be able to listen to the PIP's audio through headphones The VCR for recordings must be connected through the A/V Receiver.

IMPORTANT

To prevent damage from a sudden increase in volume, make sure the TV volume is set to low before setting speakers to ON.

A/V Setting Descriptions: Audio

NOTE: The effects of the Audio Settings of Bass, Treble, Balance and Surround affect the sound heard through the TV speakers only.

Audio Settings

◊ **Bass**
Enhances or reduces low-pitch sound.

◊ **Treble**
Enhances or reduces high-pitch sound.

◊ **Balance**
Adjusts the level of sound between the left and right speakers.

◊ **Surround**
Creates simulated stereo and surround effects through the TV speakers. Your choices are:

- Off: No surround effects.
- Surround Sound: Your TV will create a simulated surround effect when watching a stereo program.
- Simulated Stereo: Your TV will create a simulated stereo effect when watching a non-stereo program.

◊ **Listen to** (for **Ant-A** and **Ant-B**)
Determines how your TV will receive a broadcast audio signal and play back the sound you hear.

Your choices are:

- Stereo: Default setting. The TV will play stereo broadcasts in stereo and mono broadcasts in mono. The word “Stereo” will be displayed when you tune to a channel broadcasting stereo.
- SAP (Second Audio Program): Additional monaural soundtrack that you cannot hear during normal TV viewing. The SAP signal might be related to the program you are watching, such as a soundtrack in a foreign language, or unrelated to the program you are watching, such as a weather report. If an SAP signal is broadcast, the letters “SAP” will be displayed when you tune to the channel.
- Mono: Reduces background noise, and should be used when receiving a weak stereo audio signal. All audio will be played mono with this setting.

◊ **Listen to** (for Ant-DTV and IEEE 1394 devices)
Determines what possible language you will hear. Your choices are:

- English
- French
- German
- Italian
- Portuguese
- Spanish
- “Other”

Listen to is not available for devices connected to the TV INPUTS.

◊ **Level Sound** (for Ant-A and Ant-B and analog devices)
Automatically equalizes the volume level of programs containing significant level differences from one segment to another (for example, regular programming to commercials). To receive the best fidelity with music programs, you can turn this setting to Off.

◊ **Level Sound** (for Ant-DTV and IEEE 1394 devices)
Automatically reduces loud passages and boosts soft passages to a more uniform loudness. When connecting to an A/V Receiver, set level sound to OFF and turn the TV speakers off to send full dynamics to the A/V Receiver.

This feature only works with Dolby Digital sources. Other digital audio formats do not offer this dynamic range control. In these cases, no effect will be heard when changing the level sound setting.

NOTE: A slider will display on-screen for most settings. When the slider is displayed it has a numeric value, where 63 is the maximum, 31 is the mid-point and 0 is the minimum.

A/V Setting Descriptions: Video

Video Settings

◊ **Contrast**

Provides a slider to adjust the white-to-black level. Low contrast shows a variety of shades in darker images, while high contrast shows darker images more uniformly black and makes colors appear more vibrant. In most home lighting situations, a medium contrast looks best. High contrast is good for brightly lit environments.

◊ **Brightness**

Provides a slider to adjust the overall brightness of the picture.

◊ **Sharpness**

Provides a slider to adjust the detail and clarity.

◊ **Color**

Provides a slider to adjust the color intensity.

◊ **Tint**

Provides a slider to adjust the proportion of red to green.

◊ **Color Temp** (Color Temperature)

Allows you to adjust how white images are displayed. Your choices are:

- Low 6500K or Low (for DTV): White images will have a warm cast to them. This adjustment is an average and can vary due to ambient room lighting, video scene brightness and the TV's age. The Low 6500K represents the 6500K industry standard for NTSC (non-DTV) pictures.
- Medium: White images will be balanced between the Low (warm) and High (cool) settings.
- High: White images will have a cool cast to them. This setting may provide the most realistic picture under bright lighting.

◊ **Video Noise**

Use to reduce minor noise (graininess) in the broadcast received on Ant-A and Ant-B or Inputs 1-3 and Component 1 and 2. Use standard with good quality signals.

◊ **Film Mode - On or Off**

On is the automatic setting and will automatically detect and apply film decoding correction for signals that originated on 24 frames per second film cameras and then were converted for broadcast to 30 frames per second video.

When the original signals originated on 30 frames per second video cameras, the On setting will automatically apply video decoding, the same as used with the Off setting. Try the Off setting when the TV seems to have difficulties and adds too many jagged edges to the images.

Film Mode is not effective for progressive scan (480p) devices, and high definition signals.

◊ **DefinEdge VSM**

Selected image outlines are emphasized, resulting in sharper images, when On. When turned Off, the velocity scanning modulation and edge enhancer functions are prevented. The default is On.

NOTE: A slider will display on-screen for most settings. When the slider is displayed it has a numeric value, where 63 is the maximum, 31 is the mid-point and 0 is the minimum.

Advanced Menu: Reset Factory Defaults, Convergence

Advanced Menu: Convergence

Figure 22

Select Advanced to perform the functions listed below.

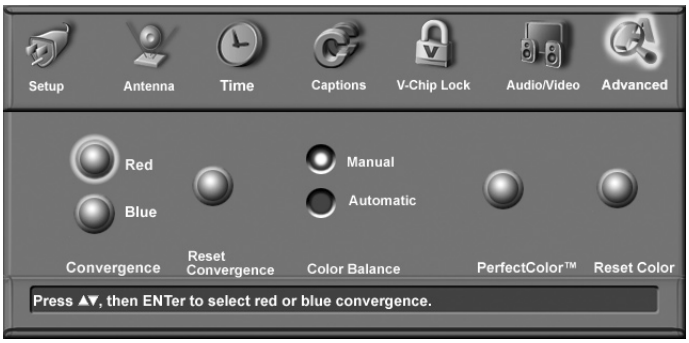

Figure 22. Advanced Menu, Convergence

Your Mitsubishi TV has three picture tubes which need to be aligned to properly converge the projected light beams on the screen. Each picture tube projects a single color of red, blue or green.

During production, your TV was carefully adjusted to properly align these colors. However, moving the TV, the TV's location in relation to the Earth's magnetic poles, and the passage of time can cause these adjustments to change.

As a special feature, you have the ability to adjust the red and blue light beams in reference to the fixed green light beam. This process is called convergence. There are two separate memories for convergence. One, for SD 480i/480p signals; the other for HD 1080i signals. SD convergence should be adjusted while watching an SD source and HD convergence should be adjusted while watching an HD source.

The TV should be fully warmed up before adjusting Convergence. Turn the TV On and wait at least 30 minutes before starting adjustments.

Reset Factory Defaults Menu

Figure 23

This allows you to reset the convergence to the original factory settings. The message "Convergence reset completed" will be displayed when the factory defaults have been restored.

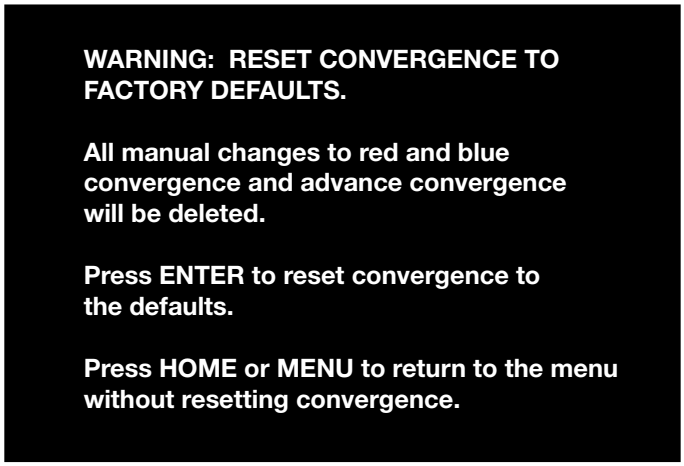
WARNING: RESET CONVERGENCE TO FACTORY DEFAULTS.
All manual changes to red and blue convergence and advance convergence will be deleted.
Press ENTER to reset convergence to the defaults.
Press HOME or MENU to return to the menu without resetting convergence.

Figure 23. Reset Factory Defaults Menu

Convergence Menu

Figure 24

When the Red and Blue crosshairs are properly converged, the center-screen crosshairs will appear white. You can press ADJUST ▲, ▼, ◀ or ▶ to move the Red and Blue crosshairs. Press VIDEO to switch between Red and Blue. Press AUDIO for the Advanced Convergence screen, and see the next page for further instructions.

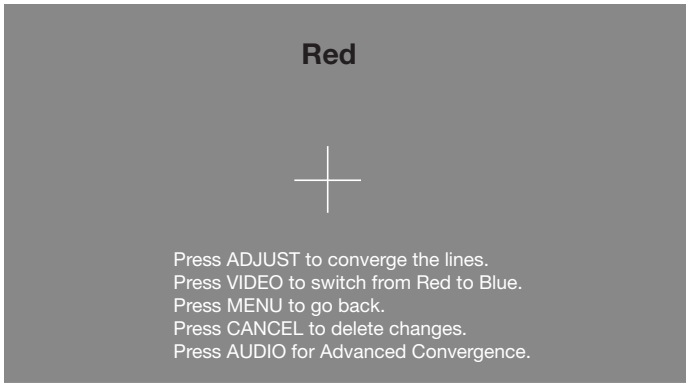
Red
Press ADJUST to converge the lines.
Press VIDEO to switch from Red to Blue.
Press MENU to go back.
Press CANCEL to delete changes.
Press AUDIO for Advanced Convergence.

Figure 24. Red Convergence Menu

Advanced Menu: Advanced Convergence, Color Balance

Advanced Convergence Menu

Figure 25

After adjusting the Red Convergence and Blue Convergence, you can fine-tune your TV by adjusting the Red and Blue convergence at 64 individual points.

1. Move the flashing bracket to a position needing adjustment by pressing ADJUST ▲, ▼, ◀ or ▶.

2. Press ENT(er) to select the position (flashing will stop).

3. Move the Red or Blue line by pressing ▲, ▼, ◀ or ▶.

4. Press ENT(er) to deselect the position (flashing will resume), and move the brackets to the next position needing adjustment.

5. Press VIDEO to switch between the Red and Blue lines. A position is properly converged when all three lines combine to appear white.

6. When completed, press MENU or HOME to save your changes, and exit the Advanced Convergence screen.

7. Press INFO to display detailed instructions on using the Advanced Convergence. Then press INFO or MENU to return to the Advanced Convergence menu.

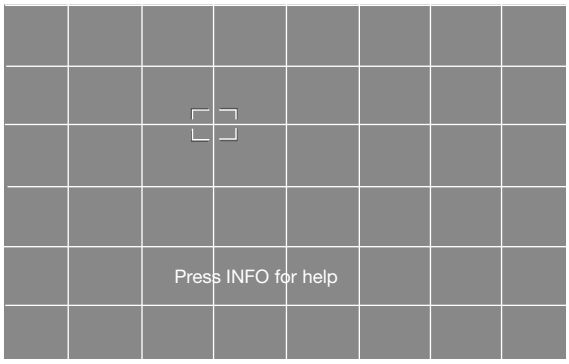

Figure 25. Advanced Convergence Menu

IMPORTANT

There are more than 64 line intersections but the flashing bracket only stops at the 64 adjustment positions.

Color Balance

Figure 26

Your Mitsubishi TV uses six colors (Magenta, Red, Yellow, Green, Cyan and Blue) to create color balance. You may adjust the intensity of the colors automatically or manually (PerfectColor™) or reset them to the default settings. Each TV input or device has a memory for PerfectColor.

Auto Color Correction

Set the Auto Color Correction option to On to optimize color automatically and continuously. Both Manual Color Adjustment and Reset Color options are grayed out and unavailable when On is selected for Auto Color Correction.

PerfectColor™ (Manual Color Correction)

Select Manual Color Balance then select PerfectColor and press ENT(er) to display the menu for manual color adjustment. Individual sliders for Magenta, Red, Yellow, Green, Cyan and Blue will be displayed. The sliders have a numeric value, where 63 is the maximum. The default setting for each color is 31 (center). Highlighted text will show which slider you are adjusting. Each active input can be individually adjusted.

Press ADJUST ▲ or ▼ to navigate between colors and ADJUST ◀ or ▶ to change the color slider settings.

The manual PerfectColor option is only available when Auto Color Correction is turned Off.

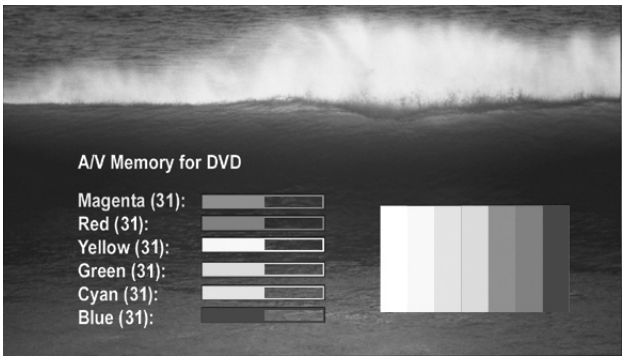

Figure 26. PerfectColor Menu, Manual Color Correction

Reset Color

Select to reset the Color Balance settings. Each active input can be individually reset.

IMPORTANT NOTES

WARNING: Do not leave stationary or letterbox images on-screen for extended periods of time. Mix types of pictures shown. Uneven picture tube aging is NOT covered by your warranty.

The normal use of a TV should include a mixture of TV picture types. The most frequently used picture types should fill the screen with constantly moving images rather than stationary images or patterns. Displaying the same stationary patterns over extended periods of time, or displaying the same stationary pattern frequently can leave a subtle but permanent ghost image. To avoid this, mix your viewing pattern. Do not show the same stationary image for more than 15% of your total TV viewing in any one week. Display constantly moving and changing images that fill the screen whenever possible.

This projection TV uses picture tubes to project the image to the screen. All picture tubes age with use. As they age, their light output is gradually reduced. Normal TV pictures fill the screen with constantly changing images. Under these conditions, picture tubes age at an even rate across the entire screen. This maintains a TV picture that is evenly bright over the whole screen. Stationary images or images that only partially fill the screen (leaving black or colored bars to fill the screen), when used over extended periods of time or when viewed repeatedly, can cause uneven aging of the phosphors used in the picture tubes and can leave subtle ghosts of the stationary images in the picture.

When using a computer or similar device through a VGA input, be sure to turn on the Screen Saver feature and set the activation time to 5 minutes or less. If your computer program allows, you should also set your toolbars to the hidden mode.

Still or stationary images may be received from broadcasters, cable channels, satellite channels, DVD discs, video tapes, laser discs, on-line services, web/internet searching devices, video games, and digital TV tuner/converter boxes. Examples of these types of images include, but are not limited to the following:

- **Letterbox top/bottom black bars**: shown at the top and bottom of the TV screen when you watch a widescreen (16:9) movie on a standard (4:3) TV.
- **Side bar images**: solid bars shown on each side of an image when watching a standard (4:3) program on a widescreen (16:9) TV.
- **Stock-market report bars**: ticker running at the bottom of the TV screen.
- **Shopping channel logos & pricing displays**: bright graphics that are shown constantly or repeatedly in the same location.
- **Video game patterns and scoreboards**
- **Bright station logos**: moving or low-contrast graphics are less likely to cause uneven aging of the picture tubes.
- **On-line (Internet) web sites**: or any other stationary or repetitive computer style images.
- **Closed Caption Backgrounds:** When set to black or bright color, if Close Caption will be used frequently, Mitsubishi suggests the use of the gray background.

Chapter . . . 6

Special Features

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NetCommand® Controlled Peer-to-Peer Connections

What is a Peer-to-Peer Connection?

Figure 1

A peer-to-peer connection allows the IEEE 1394 devices in your TV network to talk to each other without the further need of TV intervention once the peer-to-peer connection is established.

For example, the TV can setup a connection for an A/V Disc or DVCR that sends a recorded program to an IEEE 1394 monitor in another room. NetCommand will establish the connection between the two devices. Once the connection has been established, the TV can be turned off or used to watch another device. Recording from Ant-DTV to a DVCR is also a peer-to-peer connection. In this case the TV is one of the devices in the peer-to peer connection.

Analog or traditional (non-digital) devices can not be used for peer-to-peer connections.

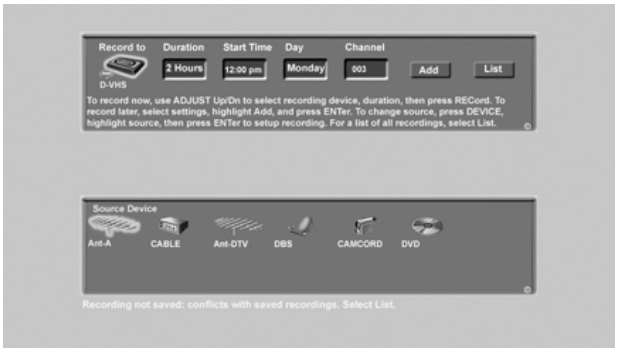


Figure 1. Record screen

Setting up a Peer-to-Peer Connection

A peer-to-peer connection is a current connection and cannot be setup as a delayed connection.

To establish a peer-to-peer connection:

1. Press REC on the TV remote.

2. Press DEVICE on the remote control to see the source device choices that you can recording from.

3. Press ADJUST ◀ or ▶ to select the source device you will record from.

4. Press ENT(er) to confirm selection and return to the "Record to" section.

5. In the "Record to" section, review the destination device (example: DVHS) and duration. Change if necessary.

6. Press REC a second time to initiate recording.

NOTE: Multiple peer-to-peer connections can occur simultaneously, sometimes with the same source device. Also, please note that peer-to-peer connections are NOT listed on the Record List screen.

Canceling a Current Peer-to-Peer Connection

When a peer-to-peer connection has been established, you can cancel the connection by highlighting the source device in the Device Selection menu. Confirm that the on-screen icon for the peer-to-peer connection is in the Connection Section next to the TV icon, then press CANCEL. The peer-to-peer connection will end and the destination icon will be removed. If there is more than one peer-to-peer connection for the same device, all of the connections will all be canceled.

NetCommand Remote Control Buttons: Device Menu, Guide

Device Menu

Pressing DEVICE MENU displays the Transport playback devices. A second press of this button will display the menus for NetCommand compatible devices. Menu access varies by device.

While watching a NetCommand compatible traditional IR controlled or an IEEE 1394 device, press DEVICE MENU once or twice to display the menu for that device.

For models WS-55813, WS-65713, WS-65813 and WS-73813 when the Device Selection menu is displayed, and a HAVi IEEE 1394 device is highlighted, pressing the DEVICE MENU button will automatically display the menu for that device over the current source. The HAVi IEEE 1394 device does not need to be the current source. Some devices do not display menus. Check the Owner's Guide of the IEEE 1394 device if you are unable to see a menu.

When the menu for the device has been displayed, to navigate, press ADJUST ◀, ▶, ▲ or ▼ and ENT(er). For some NetCommand traditional devices you will also be able to use the number buttons and other additional buttons on the TV remote.

For traditional DVD players, the Device Menu is also known as the setup menu.

For Memory cards with JPEG, MP3 or WMA7 files, pressing DEVICE MENU displays the MEDIA SETUP menu or redisplays the dialog box if the screen is blank.

Guide

GUIDE displays the on-screen programming guides.

- For NetCommand compatible satellite receivers and some cable boxes, GUIDE will display the on-screen programming guide for the receiver or cable box. Press ADJUST ◀, ▶, ▲ or ▼ and ENT(er) to navigate the displayed Guide. For NetCommand compatible satellite receivers, you may also be able to use the number or other additional buttons.

- For NetCommand compatible DVD players, GUIDE will display the DVD disc menu (not the setup menu).

- For Antenna DTV and IEEE 1394 devices, pressing GUIDE will display the Digital Channel Guide showing the sub-channels, or bitstreams for the current channel or device. For Antenna DTV only the sub-channels for the current channel are seen first. Press ADJUST ▲ or ▼ to see all the channels in memory.

- For IEEE 1394 devices with digital connections, the first press of GUIDE will display the TV's digital channel guide. The second press will display the program guide for the tuned device, such as a cable box or DBS.

- For compatible traditional VCRs, pressing GUIDE when the VCR is highlighted on the Device Selection menu, will change the VCR's input.

- For A/V Discs, pressing GUIDE will display the Track List screen.

- While the Device Selection menu is displayed with the control in the Audio Section and the A/V Receiver icon is highlighted then a press of GUIDE switches the A/V Receiver from analog audio to digital audio, and vice versa.

- For Memory cards, GUIDE displays the Thumbnail or Playlist menu.

Recording on a NetCommand® Traditional VCR, A/V Disc Search, Track List Screen

Recording on a NetCommand Traditional VCR

Pressing REC (record) on the TV's remote control will function the same way as pressing the record button on the VCR's remote control or front panel.

To record directly from antenna or cable:

1. Press DEVICE on the TV's remote to display the Device Selection menu. Highlight the traditional VCR and press POWER to turn on the VCR. If necessary, press GUIDE to select the input the VCR is on, such as Antenna input (or line input).

2. Press ENT(er) to switch the TV to the VCR.

3. Select the correct channel for recording on the VCR and then press REC to start recording. You will need to manually stop the recording at the end of the program. OR...

4. Press the DEVICE MENU button to display the VCR's menu to schedule a delayed recording directly from antenna or cable.

To record from Ant-A, Ant-B, Ant-DTV or other devices, see NetCommand Controlled Recordings.

A/V Disc Search

NetCommand is able to search to a specific time in a recording on an IEEE 1394 A/V Disc.

1. Start the playback of the desired track on the A/V disc.

2. Use the number buttons to enter the time code position of hours followed by minutes. For example, to enter one hour and twenty-two minutes (1:22) into the track, enter 1, 2, 2.

3. Press ENT(er) to skip to the time code position.

4. To cancel the request or to start over, press CANCEL instead of ENT(er).

Track List Screen

Figure 2

When viewing an A/V Disc, press GUIDE to display the Track List screen. The Track List screen provides a list of tracks for the A/V Disc, including the time and date the track was added, its duration and the title of the track. Tracks will be listed in time order with the most recent recording listed first. Track Lists vary in size. Press ADJUST ▲ or ▼ to navigate through the Track List. To play a track, select it on the list, then press ENT(er). To change pages, press CH ▲ or ▼ .

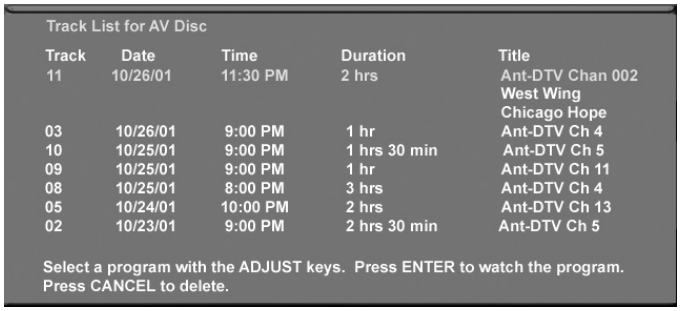

Track List for AV Disc
Track Date Time Duration Title
11 10/26/01 11:30 PM 2 hrs Ant-DTV Chan 002
West Wing
Chicago Hope
03 10/26/01 9:00 PM 1 hr Ant-DTV Ch 4
10 10/25/01 9:00 PM 1 hrs 30 min Ant-DTV Ch 5
09 10/25/01 9:00 PM 1 hr Ant-DTV Ch 11
08 10/25/01 8:00 PM 3 hrs Ant-DTV Ch 4
05 10/24/01 10:00 PM 2 hrs Ant-DTV Ch 13
02 10/23/01 9:00 PM 2 hrs 30 min Ant-DTV Ch 5
Select a program with the ADJUST keys. Press ENTER to watch the program.
Press CANCEL to delete.

Figure 2. Track List screen

Once a track is selected, the first program begins to play. If there are multiple programs in the track, the names are displayed. Another program for the same track can then be selected. A track must be selected and playing for the multiple programs to be displayed. To delete a track, select it, then press CANCEL. If the track includes multiple programs, all of them will be deleted.

Memory Card Playback

Warning: Some memory cards available on the market are not properly certified for use by the Card Reader. If you experience problems with the reading of your file, please transfer your files to a card from a different manufacturer.

Memory Card Slots

Inserting a Memory Card

1. Insert a card into a matching card slot on the front of the TV. Be sure to use the correct card slot. Card 1 will accept MultiMediaCard™ and SD Memory Card. Card 2 will accept SmartMedia™. Card 3 will accept CompactFlash®. Card 4 will accept MEMORY STICK™. Cards up to 128mb, with a file format of FAT 16 (block size = 1024 or 2048) are supported.

   Normally the label side should be up, but if the card does not fit, try turning the card over and insert again. When properly inserted, the light next to the slot will light up.

2. Press DEVICE on the remote control to display the Device Selection Menu and then select the correct card slot from the list, using ADJUST ◀, ▶, ▲ or ▼, then press ENT(er).

3. The Memory Card screen (figure 3) will automatically display. Use the AUDIO button to switch from JPEG Picture Slideshow setup to MP3 or WMA7 Audio Playlist setup or use the VIDEO button on the remote to switch from the MP3 or WMA Audio Playlist setup to JPEG Picture Slideshow setup.

Don't pull the Memory Card out while it is playing.

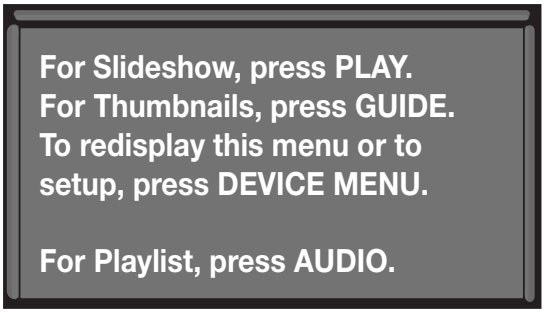

For Slideshow, press PLAY.
For Thumbnails, press GUIDE.
To redisplay this menu or to setup, press DEVICE MENU.
For Playlist, press AUDIO.

Figure 3. Memory Card screen

4. On the remote control, press:

PLAY:	to start the slideshow or play audio.
GUIDE:	to display the JPEG Thumbnail menu or Audio track playlist.
DEVICE MENU:	to display the Media Setup menu (Figure 6).

Remote Control Buttons for Controlling the Playback

For JPEG Pictures Slideshow:

PLAY: begins or resumes slideshow playback
PAUSE: pauses or resumes playback while in the automatic advance mode.
FF: skips to the next slide.
REW: returns to the previous slide.
FORMAT: single press rotates the slide 90˚. Multiple press continues to rotate the slide.
STOP: Stop slideshow, return to Memory Card screen.

For MP3 or WMA Audio Playback

PLAY: begins or resumes playlist playback.
PAUSE: pauses or resumes playback.
FF: skips to the next track/song.
REW: skips to the previous track/song.
STOP: Stop playback and returns to Memory Card screen.

Using the Picture Thumbnail Menu or Audio Menu

For JPEG Picture Thumbnail Menu:
Figure 4

1. Press GUIDE on the remote to display the JPEG picture Thumbnail menu.

2. Press ADJUST ◀, ▶, ▲ or ▼ to move the highlight to different images (CH up/down will change pages of the Thumbnail menu). Use REW to go to the first slide and FF to go to the last slide on the page.

3. Press FORMAT to rotate the selected image 90˚ (pressing FORMAT four times will rotate the image completely around to the original position).

4. Press PLAY to begin playback of the Slideshow from the selected image. The Thumbnail menu will be taken down.

IMG_0063.jpg
Press ADJUST to select a slide, REW for first slide, CHANNEL for next page.
Press PLAY to start the slideshow from the selected slide.
Press FORMAT to rotate an image.
Page 1 of 2

Figure 4. JPEG Thumbnails

Memory Card Playback, continued

For MP3 or WMA7 Audio Menu:
Figure 5

1. Press GUIDE on the remote to display the Playlist.

2. Using ADJUST ▲ or ▼ to move the highlight to different tracks (CH up/down will change pages of the Playlist).

3. Press PLAY to begin playback. The Playlist menu will be taken down. An asterisk (*) will be next to the song currently playing.

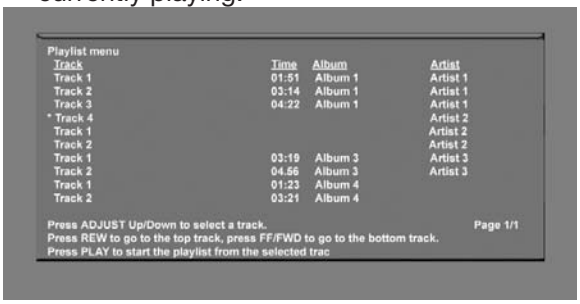

Playlist menu
Track Time Album Artist
Track 1 01:51 Album 1 Artist 1
Track 2 03:14 Album 1 Artist 1
Track 3 04:22 Album 1 Artist 1
* Track 4 Artist 2
Track 1 Artist 2
Track 2 Artist 2
Track 1 03:19 Album 3 Artist 3
Track 2 04:56 Album 3 Artist 3
Track 1 01:23 Album 4
Track 2 03:21 Album 4
Press ADJUST Up/Down to select a track.
Page 1/1
Press REW to go to the top track, press FF/FWD to go to the bottom track.
Press PLAY to start the playlist from the selected trac

Figure 5. Audio Playlist

COMPATIBLE PICTURE OR AUDIO FILES:

For JPEG Pictures up to 128mb:

1. Still images recorded on digital cameras using the Exchangable Image File Format (EXIF) standard for digital still cameras and Design Rules for Camera File Systems (DCF).

   Some images opened and resaved on a computer may not playback or may not be able to display a picture in the thumbnail list. This is because the computer program that opened and resaved the images changed the file to an incompatible format.

2. Standard digital images with a maximum size of 5-megapixels for each image, or 2560 x 1920 pixels.

3. Full path file names can be no longer than 50 characters and must end in a .jpg extension. Not all 50 characters will display.

For MP3 or WMA7 Audio files:

1. Files recorded with sampling rates of 32 KHz, 44.1 KHz or 48 KHz.

2. Files recorded with fixed bit rates

3. File names with .mp3 or .wma extensions

NOTE: During MP3 or WMA audio playback, audio from the cards will be sent to the A/V Receiver as analog audio. Digital out is not available.

Media Setup Menu
Figure 6
Press DEVICE MENU at any time to display the Media Setup screen, where you can adjust the Slideshow Display, Frequency, Interval or Playlist Frequency.

For JPEG Picture Slideshow Setup

- For JPEG picture Slideshow playback, select Automatic or Manual advance. For manual operation, press PLAY or ENT(er) on the remote control to advance each slide.

- For automatic advance, select the frequency or number of times to show the complete slide show, Once, Twice or Continuously.

- For automatic advance, select the interval time each slide is shown, for example, 5 seconds, or 30 seconds.

For MP3 or WMA7 Audio Playlist Setup

- Select the frequency or number of times to play the complete playlist. Once, Twice or Continuously.

When you are finished, press DEVICE MENU on the remote control to redisplay the Memory card screen or press HOME to exit.

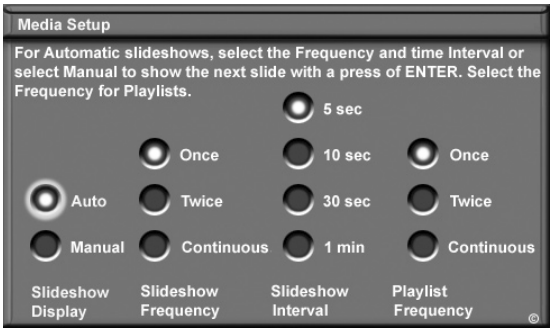


Figure 6. Media Setup Menu

IMPORTANT
JPEG images cannot be edited through the TV. Only name changes should be made on your PC to avoid file incompatibility problems.

MP3's must have at least 32 KHz sampling rate.

Device Menu with Net Command®

NetCommand Compatible Traditional Devices (Analog)				
When Device Selection Menu is Displayed and the Device is Highlighted (Yellow Outline)				
REMOTE CONTROL BUTTON	A/VReceiver	VCR	DVD	Cable Box/DBS
POWER	Power On/Off (toggle)	Power On/Off (toggle)	Power On/Off (toggle)	Power On/Off (toggle)
DEVICE MENU	n/a	n/a	n/a	n/a
GUIDE	Changes between Digital and Analog audio	Changes VCR inputs	n/a	Changes antenna inputs (RCA model DTC-100 only)
FORMAT	n/a	n/a	Changes output between interlaced and progressive	Changes output between HD and SD select models

IEEE 1394 and HAVi Devices (Digital)				
When Device Selection Menu is Displayed and the Device is Highlighted (Yellow Outline)				
REMOTE CONTROL BUTTON	Tuner/ Cable box/DBS	A/VDisc	D-VCR	Amplifier
POWER	Power On/Off (toggle)	Power On/Off (toggle)	Power On/Off (toggle)	Power On/Off (toggle)
DEVICE MENU	Device Menu (if HAVi compaible), AV/C control panel (if provided)	Device Menu (if HAVi compatible), AV/C control panel (if provided)	Device Menu (if HAVi compatible), AV/C control panel (if provided)	Device Menu (if HAVi compatible), AV/C control panel (if provided)
GUIDE	n/a	n/a	n/a	n/a
FORMAT	n/a	n/a	n/a	n/a

Device Menu with Net Command®, continued

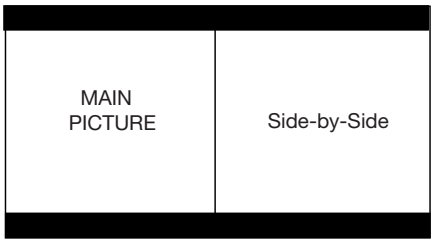
When Net Command® Compatible Traditional Device is Viewed or Played				
Remote Control Button	A/V Receiver	VCR	DVD	Cable/DBS
CH up/down		Channel up/down	Skip Forward/Backwards Chapter or Track	Channel up/down Page up/down when guide showing
VOL up/down	Volume Up/Down			
MUTE	Mute On/Off			
0-9 (digits)		number functions	number functions	number functions
QV				Last Channel Recall
DEVICE Menu		1st press Transport Menu, 2nd press Setup Menu display	1st press Transport Menu, 2nd press Setup Menu display	Setup menu display or Action function
HOME				
ENTer			Enter or select	Enter or select
CANCEL		Counter Reset	Exit or return	Exit or return
GUIDE			Disc menu display	Channel Guide
ADJUST			up/down left/right	up/down left/right
PLAY		Play	Play	
STOP		Stop	Stop	
RECORD		Record		
REW/REV		Rewind/Reverse	Reverse	
FF/FWD		Fast Forward or Fast Play	Fast Play	

When IEEE 1394 and HAVi Device is Viewed or Played				
Remote Control Button	Cable/DBS	A/VDisc	VCR	Amplifier
CH up/down	Channel up/down Page up/down when HAVi guide showing	Skip Forward (30 seconds) Skip Backwards (12 seconds) Page up/down (when track is displayed)	Index search forward/reverse	
VOL up/down				Volume Up/Down
MUTE				Mute On/Off
0-9 (digits)	number functions	Search by time (when followed by ENTer)		
QV	Last Channel Recall			
DEVICE Menu	Device Menu (if Havi compatible)	1st press Transport Menu, 2nd press Setup Menu display (if Havi compatible)	1st press Transport Menu, 2nd press Setup Menu display (if Havi compatible)	Device Menu (if Havi compatible)
HOME	Exit menus/displays	Exit menus/displays	Exit menus/displays	Exit menus/displays
ENTer	Enter or select	Enter or select	Enter or select	Enter or select
CANCEL	Cancel function	Cancel function	Cancel function or Counter Reset	Cancel function
GUIDE	Digital Channel Guide	Track or Program list display	Digital Channel Guide	
ADJUST	up/down left/right	up/down left/right	up/down left/right	up/down left/right
PLAY		Play	Play	
STOP		Stop	Stop	
RECORD		Record	Record	
REW/REV		Reverse or Slow Play	Reverse or Slow Play	
FF/FWD		Fast Play	Fast Play	

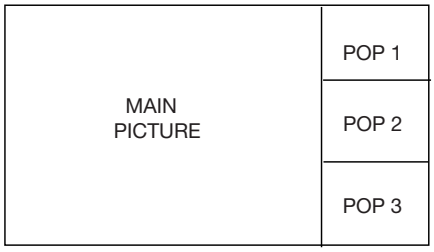
Operation of PIP and POP

Picture-In-Picture (PIP) and Picture-Outside-Picture (POP) features allow you to view programming in different ways. While watching the main screen, you can display programs from other channels and other inputs. You can display a single PIP, side-by-side pictures, three POPs, or nine POPs Activating the PIP and POP

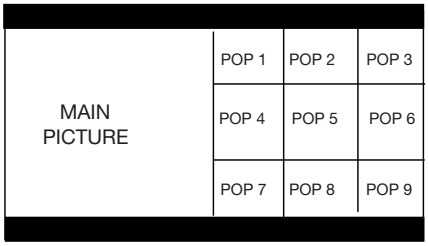
Press PIP/POP to activate the PIP/POP option. With each press of the PIP/POP button on the TV remote control (within 3 seconds of each other), the PIP/POP will cycle through the following display options:



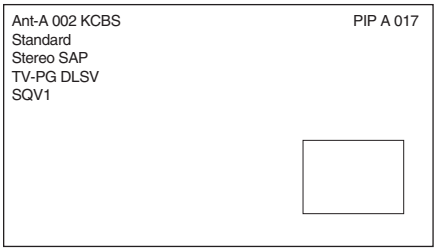
• **POP**
side-by-side pictures



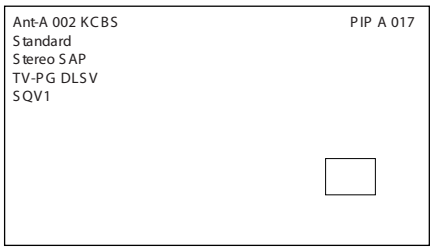
• **3 POP**



• **9 POP**



• **PIP large**



• **PIP small**

• **PIP/POP:** off

To turn PIP/POP off, wait at least 10 seconds, and press PIP/POP. The next time you activate PIP/POP, the last used PIP/POP option will be displayed

Changing PIP/POP Device

Press PIP DEVICE to change the PIP or POP picture source device. A menu similar to the Device Selection menu will be displayed.

Changing PIP/Side-by-Side Channels

Press PIP CH to scroll up and down through memorized channels on Ant-A and Ant-B.

Exchanging Program Images

Press EXCH to exchange the main picture and the PIP/POP picture.

Moving PIP Image

If no menus are on the screen, press ADJUST ▲, ▼, ◀ or ▶ to move the PIP display anywhere on the main screen.

Automatic POP Switching

When automatic POP switching is active, the TV will cycle through memorized channels on Ant-A or Ant-B or strobe pictures from other A/V components in the POP display. Press PAUSE to pause or restart automatic POP switching.

Selecting POP "Live" Image

Press ADJUST ▲, ▼, ◀ or ▶ to select a different POP "live" image (automatic POP switching must be paused.)

Freezing the PIP and Side-By-Side Picture

Press PAUSE to freeze the PIP and side-by-side images. Press PAUSE again to return to a "live" image.

IMPORTANT

Side-by-Side cannot show the same channel or device on both sides.

ANT-B is not available as the PIP, POP or Side-by-Side while ANT-A is the main image.

DVI devices are not available as PIP or POP or Side-by-Side but can be the main picture.

PIP/POP is not compatible with signals from ANT-DTV, IEEE 1394 or Memory Cards.

Display Formats

This is a wide screen TV (also known as a 16:9 TV). This shape reflects the new types of images available from HDTV and many DVDs. There are still many older style narrow screen images (called 4:3 aspect ratio) you will encounter. While there will never be a perfect solution for displaying a narrow image on a wide screen, Mitsubishi offers several display formats to choose from.

Press FORMAT on the TV remote control to cycle through the available display formats.

The last used format for each device will be used when you return to that device.

Note: Not all formats are available for PIP/POP.

PIP/POP Formats			
	Standard	**Expand**	**Narrow**
PIP	**X**	**X**	**X**
Side by Side	**X**	**X**	
3 POP	**X**	**X**	
9 POP	**X**	**X**	

Definitions:

480i Signals: Traditional interlaced signals from or through Ant-A, Ant-B, Inputs 1-3, Component 1 & 2, and Inp-DTV.

480p Signals: Progressive scan DVD signals through Component 1 & 2 and Inp-DTV.

1080i Signals: High definition signals received through Component 1 & 2 and Inp-DTV.

SD 4:3: Standard definition narrow screen format signals from Ant-DTV and IEEE 1394 devices.

SD 16:9: Standard definition wide screen format signals from Ant-DTV and IEEE 1394 devices.

HD: High definition wide screen format signals from Ant-DTV and IEEE-1394 devices.

Anamorphic (also listed as "Enhanced for Widescreen TVs): These DVDs are recorded in a special way to properly show high-resolution images on 16:9 TV sets in the standard mode. This is the recommended choice.

Non-Anamorphic (also listed as 4:3, 1:33:1, Letterbox or Full Screen): These DVDs are recorded for use with traditional shaped TVs. They may be full screen (on 4:3 or 1:33:1) which crops movies to fit the narrow TV, or Letterboxed which adds black top and bottom bars.

This information may or may not be listed on the DVD case. Some DVDs support both types of recordings.

- **Standard:** This is the full screen format. HDTV signals usually use this format. This format is useful to display Anamorphic DVDs that have 1.78:1 or 1.85:1 aspect ratios. Anamorphic DVDs that have a 2.35:1 aspect ratio will still display black bars at the top and bottom, but will show the entire image correctly. Narrow (4:3) images will be stretched evenly from side to side. Available for all signals.

- **Expand**: This will enlarge the picture to fill the screen, cropping off some of the image at the top and bottom. This is useful to reduce the letterbox top and bottom bars of non-anamorphic DVD. Available for analog 480i, 480p and digital SD 4:3 signals only.

- **Zoom:** This will enlarge the picture, cropping off some of the image at each side and top and bottom. This is useful to remove or reduce the black top and bottom bars on anamorphic DVDs with a 2.35:1 aspect ratio. Available for analog 480i and 480p signals only.

- **Stretched**: This format will stretch a narrow (4:3) image across the screen, however, there is less stretch in the center than the sides. This will allow the entire narrow image to be displayed across the screen with less distortion than seen in the Standard format. Available for analog 480i and 480p signals only.

- **Stretch Plus:** Similar to stretch mode, however to minimize distortions on the side, the picture is expanded to crop off portions of the top and bottom. Useful when no important information is shown at the top and/or bottom of the screen. Available for analog 480i and 480p signals only.

- **Narrow:** This format will display narrow (4:3) images in their original shape, and add stationary gray side bars to fill the screen. Available for 480i, 480p and digital SD 4:3 signals only.

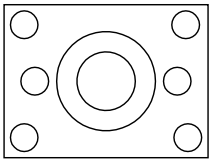
- **Wide Expand:** Enlarges the picture, cropping some of the image on both sides. This Expand format is useful to remove or reduce black side bars on HD broadcasts of 4:3 images with black bars. Available for analog 1080i, digital SD 16:9 and digital HD signals.

IMPORTANT

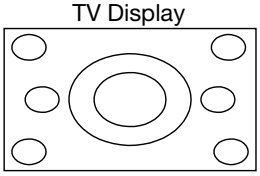
Caution should be observed when using the Narrow format due to the stationary gray side bars. Please see guidelines concerning stationary images, page 72.

Display Formats

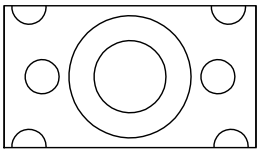
Original Signal
Non-anamorphic or Digital 4:3



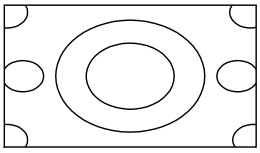
TV Display



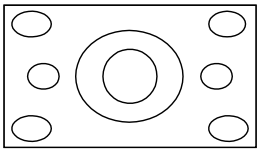
Standard
(not recommended, distorted)



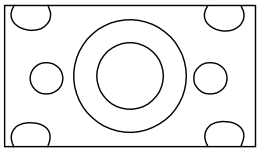
Expand
(recommended for letterboxed)



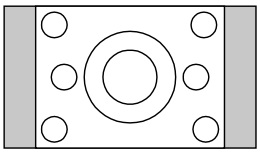
Zoom
not available for digital SD 4:3
(not recommended, distorted)



Stretched
not available for digital SD 4:3
(recommended for standard broadcast)

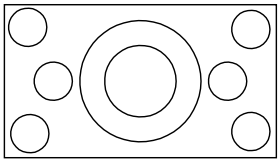


Stretched Plus
not available for digital SD 4:3
(recommended for standard broadcast)

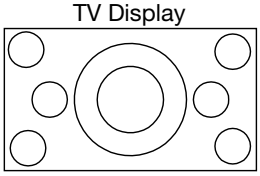


Narrow
(recommended for occasional use)

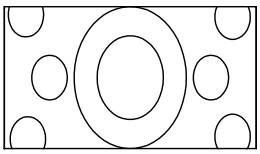
Original Signal
Anamorphic or Digital 16:9



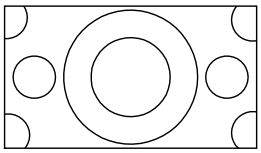
TV Display



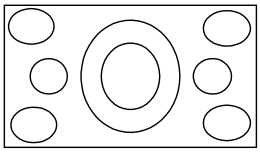
Standard
(recommended)



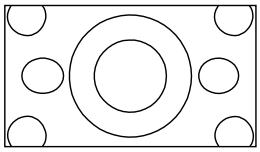
Expand
not available for digital SD 16:9, HD or analog 1080i
(not recommended, distorted)



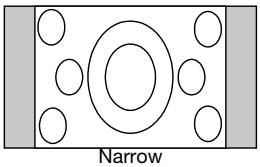
Zoom
not available for digital SD 16:9, HD or analog 1080i
(recommended for anamorphic 2.35:1)



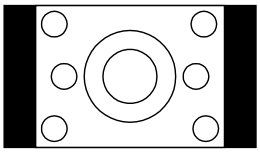
Stretched
not available for digital SD 16:9, HD or analog 1080i
(not recommended, distorted)



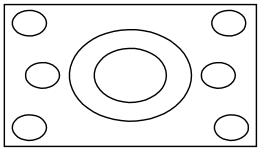
Stretched Plus
not available for digital SD 16:9, HD or analog 1080i
(not recommended, distorted)



Narrow
not available for digital SD 16:9, HD or analog 1080i
(not recommended, distorted)



Original HD or SD 16:9
with side bars in broadcast



Wide Expand
available only for digital SD 16:9, HD and analog 1080i
(recommended to remove side bars)

Software Updates

From time to time, Mitsubishi may offer software updates to expand the features or operation of this TV. When these updates are available they will be announced on our web site, Mitsubishi-tv.com. If you return your Owner's registration card, with your model and serial number, you may receive written notification of available software updates.

IMPORTANT

Do not attempt to update the software of this TV with software or cards that are not provided by or authorized by Mitsubishi Digital Electronics America, Inc. Non-authorized software may damage the TV and will not be covered by the warranty.

Appendix A:
Bypassing the V-Chip Lock:

Lock Bypass Instructions Have Been Filed for Future Reference

Bypassing the V-Chip Lock

After you set the lock, you need your passcode to view a V-Chip locked program, view the locked TV, cancel the lock, or enter the V-Chip Lock menus.

If you forget your passcode, you can view the locked TV without entering your passcode. This is done by pressing the number 9 and QV buttons on the TV remote control at the same time, when your passcode is requested. This process temporarily unlocks the TV.

When entering the V-Chip Lock menu, this process deletes your old passcode and prompts you to enter a new passcode. Pressing HOME at this time will cancel the entire passcode.

Bypassing Front Button Lock

If you have misplaced the remote control, you can bypass the front button lock by pressing and holding the MENU button on the front panel for more than 8 seconds.

IMPORTANT

Cut along the dotted line and file bypass instructions in a safe place for future reference.

IMPORTANT

When changing or deleting your passcode, you must use the remote control included with this TV. You cannot use a Mitsubishi remote control from another component or a "universal" remote.

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Appendix B: High Definition Input Connection Compatibility

Component-1 and Component-2 Inputs

These inputs are compatible with component video signals from standard DVD players and other equipment sending a standard NTSC component video signal (480i). These inputs are also compatible with newer DVD players sending 480p and are compatible with signals from digital TV receivers that send 1080i component video signals.

VGA Input

This input will accommodate most computers capable of supporting a VGA monitor. The only compatible display resolution is 640x480. The sync rate is 60 Hz. SVGA and XVGA resolutions are not supported.

InputDTV

This input is compatible with most standard DTV and satellite receivers with component video (YPbPr) outputs. Compatible DTV signals are SDTV 480i/480p, and HDTV 1080i. All other DTV signals, such as 720p, need to be converted by the DTV receiver to one of the compatible signal types. Please check the DTV receiver specifications before connecting.

This input is compatible with some DTV receivers using RGB with “separate H and V sync”. Compatible DTV signals are SDTV 480i, 480p, and HDTV 1080i. All other DTV signals, such as 720p, need to be converted by the DTV receiver to one of the compatible signal types. Industry standards for DTV RGB signals (systems, synchronization, timing, and signal strengths) are not currently established. These inputs will not be compatible with all DTV receivers that offer RGB, HV outputs. RGB, HV signals with less than 5 cables are not compatible.

If your DTV receiver offers both DTV component video signals and DTV RGB, HV signals, we suggest you use the DTV component video signals. Check the DTV receiver specifications before connecting.

Input Levels and Timing with Component Video

EIA - 770.1 and EIA - 770.2 Standard Levels & Timing

Y = 1.0Vp-p (includes sync) 75-Ohms

Pr = 700mVp-p, 75-Ohms (can also receive signals from outputs labeled R-Y and Cr)

Pb = 700mVp-p, 75-Ohms (can also receive signals from outputs labeled B-Y and Cb)

Input Levels and Timing When Used With HD Component Video Signals

EIA - 770.3 Standard Levels and Timing

Y = 1.0Vp-p (includes sync) 75-Ohms
Pr = 700mVp-p, 75-Ohms
Pb = 700mVp-p, 75-Ohms
H = Not Used
V = Not Used

Input Levels and Timing When Used With RGB, HV Video Signals

G = 700mVp-p (no sync), 1Vp-p (with sync) 75-Ohms
R = 700mVp-p, 75-Ohms
B = 700mVp-p, 75-Ohms
H = 4Vp-p+/-1.0v, 2.2k-Ohms
V = 4Vp-p+/-1.0v, 2.2k-Ohms

NetCommand® IEEE 1394 & HAVi System Compatibility

This television is designed to conform to IEEE 1394 AV/C and HAVi Software standards in effect at the time of development. This exciting new networking and control technology is designed to provide high-performance digital connections and product control, making products easier to use.

At the time of development,the only products available for compatibility testing - the Mitsubishi and JVC DVHS VCRs. These D-VHS VCRs are fully compatible with this TV.

As other manufacturers produce products that use IEEE 1394 AV/C and HAVi, they will be responsible for the development of their products to meet the standards of the technology, as well as compatibility testing with other products. Mitsubishi cannot be responsible for their efforts, and therefore cannot promise compatibility with these other products. Any compatibility problems with other manufacturers products should be brought to the attention of those manufacturers.

Full HAVi compatibility is limited to models WS-55813, WS-65713, WS-65813 and WS-73713. Basic function HAVi compatibility is available with the other TV models.

Appendix C:Remote Control Programming Codes

To Program the Remote to Control "Other" Brands of Audio and Video Products

1. Move the slide switch at the top of the remote to the product you want to control.

2. Press and hold the POWER button on the remote control.

3. Enter the first three digit code listed for your equipment, and then release the POWER button on the remote control.

4. Point the remote control at the equipment and press the POWER button. If the equipment responds, the remote control is properly programmed to operate the equipment. If the equipment does not respond, repeat steps 2-4 with the next three digit code listed in step 3 for your equipment.

A/V Receivers

Mitsubishi	010, 011, 012, 013, 014, 360
Admiral	220
Aiwa	225, 226, 241
B & K	352
Bose	351
Denon	234, 235, 236, 245, 246, 359, 361
Fisher	204
Gerrard	213
Harman Kardon	215, 223, 242, 362
Jensen	223, 229
JVC	232, 233
Kenwood	200, 208, 289
KLH	363
Koss	357
Magnavox	227, 228
Marantz	224, 350, 360
McIntosh	216
Nakamichi	206, 217
Onkyo	209, 214, 240, 247
Optimus	203, 227, 231, 230
Panasonic	219, 218, 221
Parasound	356
Philips	223, 248, 290
Pioneer	205, 207
Polk Audio	353
Quasar	219, 218, 221
RCA	203, 205, 227, 231,230
Sansui	203, 211, 239
Sharp	234, 237
Sherwood	354, 355
Sony	222, 249, 364, 365
SoundDesign	238
TEAC	212, 213, 210, 211
Technics	221, 218, 219
Venturer	358
Victor	232, 233
Yamaha	201, 202, 243, 244

Cable Box

ABC	124
Archer	125
Cableview	105
Citizen	122, 105
Color Voice	128, 129, 130, 106, 107
Comtronics	128, 129, 130 ,106, 107
Curtis	112, 113
Diamond	124, 125
Eagle	129
Eastern	134
GC Brand	105
GE	112, 113
Gemini	122, 143
General Instrument /Jerrold	119, 120, 121, 122, 123 124, 125, 126, 127
Hamlin	112
Hitachi	103, 124
Macom	103, 104, 105, 108
Magnavox	128, 129, 130, 106, 107, 133, 138
Memorex	130
Movietime	105
Oak	102
Panasonic	114
Paragon	117
Philips	128, 129, 130, 106, 107, 133, 138, 131
Pioneer	101, 116
Pulsar	105
RCA	115
Regal	112
Regency	134
Rembrant	105, 138
Samsung	105
Scientific Atlanta	112, 113, 194
Signature	119, 124, 125, 126, 127, 120, 121, 122
SL Mark	105, 101
Sprucer	105,
Starcom	119, 124, 125, 126, 127, 120, 121, 122
Stargate	105
Teleview	101, 105
Tocom	135, 136

Cable Box, continued

Toshiba	104
Unika	125
United Artists	102
United Cable	119, 124, 125, 126, 127, 120, 121, 122
Universal	122
Videoway	106
Viewstar	129, 130
Zenith/ Drake Satellite	117, 100

Appendix C: Remote Control Programming Codes

DVD Players

Mitsubishi	003
Aiwa	261, 274
Apex	266, 283
Bose	286
Denon	250, 273
Ferguson	251
GE/RCA/Proscan	251, 256
Harman Kardon	282, 288
Hitachi	270
JVC	257
Kenwood	271, 289
Mintek	285
Next Base	284
Normande	251
Onkyo	267, 280
Oritron	263, 268
Paite	262
Panasonic	250
Philips/Magnavox	258, 253, 272, 290
Pioneer	252
Saba	251
Sampo	263
Samsung	261
Sanyo	275
Sharp	260
SMC	275
Sylvania	264
Sony	254, 278, 279
Thompson	251
Toshiba	253, 287
Venturer	281
Vialta	277
Wave	269
XWave	269
Yamaha	250, 272, 276, 287
Zenith	259

Satellite Receivers /DBS/DTV

Mitsubishi HD/Satellite Receiver	006, 173
Echostar/Dishnetwork	175, 82, 183, 188
Express Vu	175
GE	176
Gradient	186
Hitachi	173, 181, 184
Hughes	173
Maganavox	171, 172
Panasonic	174
Philips	171, 172
RCA/Proscan	176, 179, 180,185
Samsung	192
Sony	177
Star Choice	173
Toshiba	170, 189, 190, 191, 173
Uniden	171, 172
WebTV	187

VCRs

Mitsubishi	001, 002, 060, 067, 068, 061, 062
Admiral	055
Aiwa	047, 052
Akai	049, 034, 035, 036
Audio Dynamic	031
Bell & Howell	025
Broksonic	040, 046
Canon	043, 045
Citizen	026
Craig	025, 049, 026
Curtis Mathes	065, 044, 047
Daewoo	063, 021, 044, 078
DBX	030, 031
Dimensia	065
Emerson	023, 038, 039, 040, 045, 046, 062, 063
Fisher	025, 028, 029, 027
Funai	047, 046, 040, 054
GE	065, 044, 079, 053
Go Video	057, 069, 070, 071
Goldstar	026
Gradiente	054
Hitachi	043, 065, 020, 047
Instant Replay	044, 043
Jensen	059
JVC	030, 031, 054, 076, 077
Kenwood	030, 026, 031
LXI	047, 026, 020, 027, 028, 025, 029
Magnavox	051, 043, 044
Marantz	030, 031
Marta	026
Memorex	044, 029
MGA	060, 067, 068, 061, 062
Minolta	020, 065
Multitech	067, 047, 024
NEC	030, 031, 054
Olympic	044, 043
Optimus	048, 041, 055, 026
Orion	046, 040
Panasonic	043, 044, 041, 042
Penney	044, 020, 065, 025, 030, 031
Pentax	020, 031, 065
Philco	051, 044, 047, 043, 046, 040, 063
Philips	051, 043, 044
Pioneer	043
Proscan	065, 020, 043, 044, 051, 066, 021, 022, 053
Quasar	041, 042, 043, 044
Radio Shack	053, 044, 025, 056, 029, 060, 047
RCA	053, 065, 020, 043, 044, 049, 051, 066, 021, 022
Realistic	044, 025, 056, 029, 060, 047

VCRs

Samsung	057, 022, 024, 053
Sansui	046, 040, 072
Sanyo	025, 029
Scott	021, 022, 024, 029, 060, 067, 068, 046, 040
Sears	025, 026, 027, 028, 020
Shaintom	037
Sharp	055, 056
Signature 2000	047, 055
Singer	037
Sony	048, 049, 050, 073, 074, 075
SV2000	047
Sylvania	051, 043, 044, 047
Symphonic	047
Tashiro	026
Tatung	030, 031
TEAC	030, 047, 031
Technics	041, 042, 043, 044
Teknika	044, 047, 032
Toshiba	021
Totevision	026
Vector Research	031
Wards	055, 056, 029, 064, 026
Yamaha	025, 030, 031
Zenith	064, 026

Appendix C: Remote Control Programming Codes

After entering the correct codes in each position of the remote control, use the slide switch to select which product will respond when an operational button is pressed. If the TV position has not been programmed to control NetCommand and you enter a code from the A/V Receiver chart while the slide switch is set to TV, the volume and mute functions change to match the A/V receiver. This is useful when using an A/V Receiver with the TV all the time. In all other cases, only one of the below devices is allowed for each slide switch position.

TV position (when the remote has not been programmed to operate NetCommand):

- TV
- A/V receiver (volume and mute only)

Cable/DBS/DTV position:

- Cable box
- Satellite receiver
- DTV receiver

VCR position:

- VCR
- DVD
- LD Player

DVD position:

- DVD
- Cable box
- LD Player
- VCR

Audio position:

- A/V receiver
- Cable box
- Mitsubishi CD player [If you have a Mitsubishi A/V receiver, the audio position may be used in conjunction with selected Mitsubishi CD players. Your audio position must be programmed to 010].

IMPORTANT

Some manufacturers may change their products, or they may use more than one remote control system. If this is the case, your remote control may not be able to operate your VCR, DVD, cable box, satellite receiver, or A/V receiver.

IMPORTANT

If the remote control has not been programmed to operate NetCommand and slide switch is set to TV when you enter an A/V receiver code, VOLUME and MUTE will control the A/V receiver rather than the TV. To return volume and mute control to the TV, set the slide switch to TV, press and hold POWER and enter 000.

Appendix C: Remote Control Programming Codes

When your remote control has been programmed to operate another manufacturer's product, the function performed on each layer can vary. The most common functions are:

VCR
•POWER •PLAY •PAUSE •FF/FWD •CHANNEL up/down •REC •STOP •REW/REV •Mitsubishi VCRs will be compatible with additional buttons
Cable Boxes and Satellite Receivers
•POWER (on some models) • CHANNEL up/down • 0-9 Number Buttons (on some models)
A/V Receivers
•POWER •VOLUME •MUTE
Mitsubishi A/V Receivers
•Direct Input Selection Buttons -use number buttons, SQV, and QV (on some models)
Mitsubishi CD Players (not all functions for all models)
•PLAY •FF/FWD •REW/REV •PAUSE •STOP
DVD and Laser Disc Players (not all functions for all models)
•POWER •PLAY •ARROW up/down/left/right •PAUSE •CANCEL (on some models) •MENU •STOP (on some models) •REW/REV •ENTER •0-9 Number Buttons (on some models)
Mitsubishi Satellite Receiver
•POWER •GUIDE •0-9 Number Buttons •QV •SQV (FAV) •ENTER •CHANNEL up/down •INFO •HOME (EXIT) •ADJUST up/down/left/right •SUB (-) •MENU (ACTION)

IMPORTANT

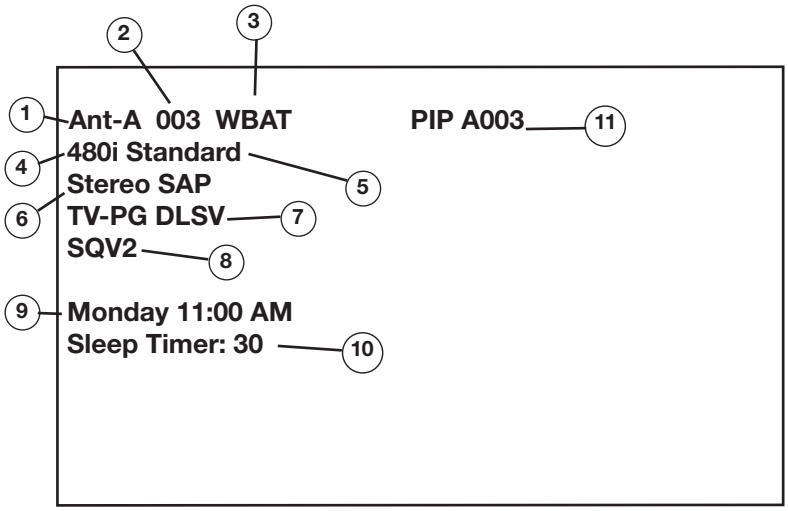
The remote control may return to its initial setting when the batteries are changed. You may need to reprogram.

Appendix D: On Screen Information Displays

When you turn on the TV, change Devices, change Channels or when you press the INFO button on the remote control the TV will display the current status. Below are the most common displays; please note that seldom or never do all of the different status indicators appear at the same time.

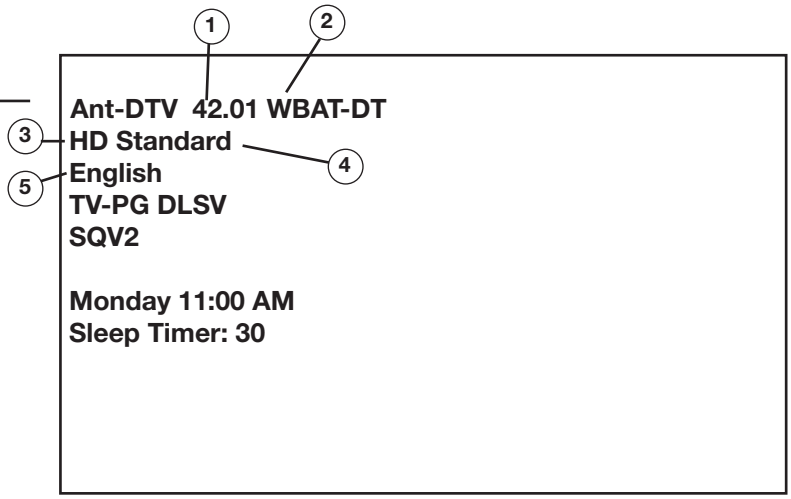
Analog Antenna or Devices

1. Antenna or Device being viewed
2. Analog channel being received: If antenna being viewed
3. Analog channel name (only if manually programmed)
4. Signal Type being received
   Possible:
   Ant-A, Ant-B or Input 1-3 – 480i
   Component 1, 2 – 480i, 480p or 1080i
   Inp-DTV
5. Screen format being used
   Possible:
   Analog 480i/480p signals – Standard, Expand, Zoom, Stretch, Stretch Plus, Narrow
   1080i signals - Standard, Wide Expand
6. Stereo and/or SAP being broadcast
7. V-Chip Ratings
8. Channel in SuperQuickView bank 2
9. Day and Time
10. Sleep Timer remaining time
11. PIP source and channel



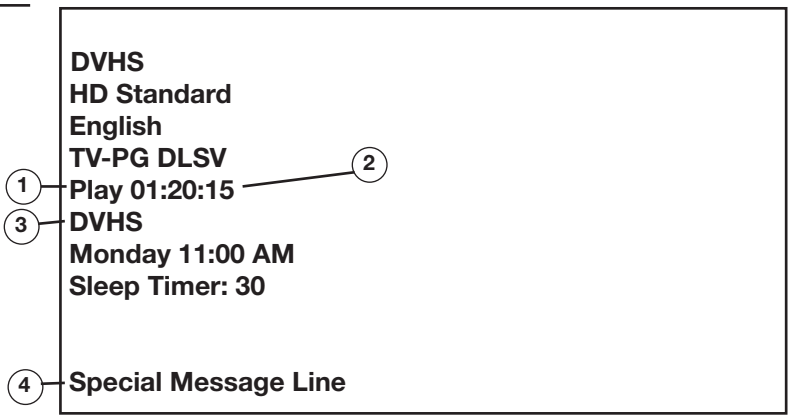
Digital Antenna

1. Digital Major and Sub channel number
2. Digital Channel Name (only if broadcast)
3. Signal Type being broadcast/received
   Possible: SD 4:3, SD 16:9 or HD
4. Screen format being used
   Possible:
   SD 4:3 - Standard, Expand, Narrow
   SD 16:9 or HD - Standard, Expand, Wide Expand
5. Language being broadcast



Digital IEEE 1394 Device

1. Status of D-VHS VCR or IEEE 1394 device
2. Counter of D-VHS VCR
3. Media type in D-VHS VCR
4. Special message line
   (shows only when a special message is needed; may be seen with Analog signals)



Appendix E: NetCommand® Specialized Device Keys

A/V RECEIVER	CABLE or DBS	VCR	DVD	LEARNING SCREEN CHECKBOX NAME	Function	Name on TV Remote
X	X	X	X	Power*	Power On or Power On/Off	POWER**
X	X	X	X	Power (Off)*	Power Off	POWER**
X				Volume Up	Volume Up	VOL ▲
X				Volume Down	Volume Down	VOL ▼
X				Mute	Mute	MUTE
X				Analog to Digital*	Analog/Digital Switch	GUIDE**
X				Digital to Analog*	Digital/Analog Switch	GUIDE**
X				Input (1-7)	AVR Input Select	Automatic (when device is selected)
	X	X		Channel Up	Channel Scan Up	CHAN ▲
	X	X		Channel Down	Channel Scan Down	CHAN ▼
	X			Recall	Last Channel Recall	QV
	X		X	Guide	Guide	GUIDE
	X	X	X	Adjust Up	Arrow/ move Up	ADJUST ▲
	X	X	X	Adjust Down	Arrow/ move Down	ADJUST ▼
	X	X	X	Adjust Left	Arrow/ move Left	ADJUST ◀
	X	X	X	Adjust Right	Arrow/move Right	ADJUST ▶
	X	X	X	Enter	Enter/Select	ENT
	X	X	X	Menu	Device Menu or Setup Menu	DEVICE MENU
	X	X	X	Cancel	Cancel or Exit	CANCEL
	X	X	X	Info	Status Information Display	INFO
	X			Page Up	Guide Page Up	CHAN ▲ ***
	X			Page Down	Guide Page Down	CHAN ▼ ***
	X	X	X	Play	Play	PLAY
	X	X	X	Stop	Stop	STOP
	X	X	X	Forward	Fast Forward/Fwd Search	FF
	X	X	X	Rewind	Rewind/Reverse Search	REW
	X	X	X	Pause	Pause	PAUSE
	X	X	X	Record	Record	REC
	X	X	X	Enter (digits)†	Enter for channel numbers	ENT
	X	X	X	Low Speed Out*	LowSpeed 480i out	FORMAT**
	X	X	X	High Speed Out*	Hi Speed 480p/1080i out	FORMAT**
	X	X	X	1,2,3,4,5,6,7,8,9,0	1,2,3,4,5,6,7,8,9,0	1,2,3,4,5,6,7,8,9,0
	X	X		Input	Input Change	GUIDE**
		X		Sub channel separator‡	Digital Sub channel	CANCEL
			X	Chapter +	Chapter Skip Forward	CHAN ▲
			X	Chapter -	Chapter Skip Reverse	CHAN ▼

** These are paired functions (e.g. Power and Power Off). When the original remote control uses a single button for both functions, learn only the first of the paired functions.*

† If there are two Enter keys, learned the Enter key used for channel selection here . The ENT button on the remote sends the correct IR code when digits are entered.

‡ Learn the subchannel separator if a special key is used to add a separator (dash or dot) in a digital channel. Press the CANCEL button on the remote to add the separator

*** This function is performed only when the Device Selection Menu is displayed and the device icon is highlighted.*

**** Channel Up/Down as Guide Page Up/Down happens only after pressing GUIDE and returns to channel functions after pressing ENT(er) or CANCEL.*

Appendix F: Cleaning and Service

This TV is very heavy! Exercise extreme care when moving TV as foreign material may become embedded in the castor wheels which could damage wood or other delicate flooring.

Cleaning

Normally, light dusting with a dry, non-scratching duster will keep your TV clean. If cleaning beyond this is needed, please use the following guidelines:

First, turn off the TV and unplug the power cord from the power outlet.

Top and Sides of the TV:

- Gently wipe down your TV with a soft, non-abrasive cloth such as cotton flannel or a clean cloth diaper, lightly moistened with water. Dry with a second dry, soft, non-abrasive cloth.

- For oily dirt, add a few drops of mild liquid detergent, such as dishwashing detergent to the water used to moisten the cloth. Rinse with a second cloth moistened only with water. Dry with a third dry, soft, non-abrasive cloth.

Screen behind the Diamond Shield™:

- Follow the instructions for the top and sides, however, wipe gently in an up and down motion, following the grooves in the screen.

- Clean the entire screen evenly, not just sections of the screen.

- Do not allow liquid to drip down the grooves of the screen as some liquid may enter the TV between the screen and the screen frame.

- You may purchase Mitsubishi Screen Cleaner, part number CLEANER-VSS, by calling (800) 553-7278.

IMPORTANT

DO NOT use any kind of abrasive or liquid cleaner on the surface of the TV screen or Diamond Shield™.

Anti-Glare Diamond Shield™:

WS-55813 and WS-65813

Anything abrasive can scratch the anti-glare coating of the Diamond Shield™ and household and window cleaners can remove the coating.

- Follow the instructions for cleaning top and sides, however, moisten the cloth with only water.

- Do not use any cleaning chemicals on the Diamond Shield™.

- DO NOT use Mitsubishi Screen Cleaner on the Anti-Glare Diamond Shield™

Cloth speaker grills:

- Lightly brush with a soft cloth brush, or lint brush.

- If necessary, you can vacuum using the brush and hose attachments of your vacuum cleaner. Do not use the beater brush section on the grill cloth.

General Cleaning Warnings:

- DO NOT allow liquid to enter the TV through the ventilation slots or any crevice.

- DO NOT use any strong or abrasive cleaners as these can scratch the surfaces.

- DO NOT use any cleaners with ammonia, bleach, alcohol, benzine, or thinners as these can dull the surfaces.

- DO NOT spray liquids or cleaners directly on the TV's surfaces.

- DO NOT scrub or rub the TV harshly. Wipe it gently.

Service

If you are unable to correct a problem with your TV, consult your Mitsubishi dealer or a Mitsubishi Authorized Warranty Service Center.

- DO NOT adjust any controls other than those described in this Owner's Guide.
- DO NOT remove the protective back cover of your TV.

Menus not described and shown in this owner's guide are designed for Factory use and for Authorized Service Personnel. Damage caused to the TV by non-authorized changes or changes to these menus made by non-authorized persons are not covered under warranty.

Appendix G: Diamond Shield™ Removal for Models WS-48513, WS-48613, WS-55513, WS-55613, WS-65513, WS-65613 and WS-73513

The instructions below will lead you through the Diamond Shield removal process for models WS-48513, WS-48613, WS-55513, WS-55613, WS-65513, WS-65613 and WS-73513. The Diamond Shield for these models comes installed by the factory.

You will need to remove:

(2) molding clips

(1) Diamond Shield™

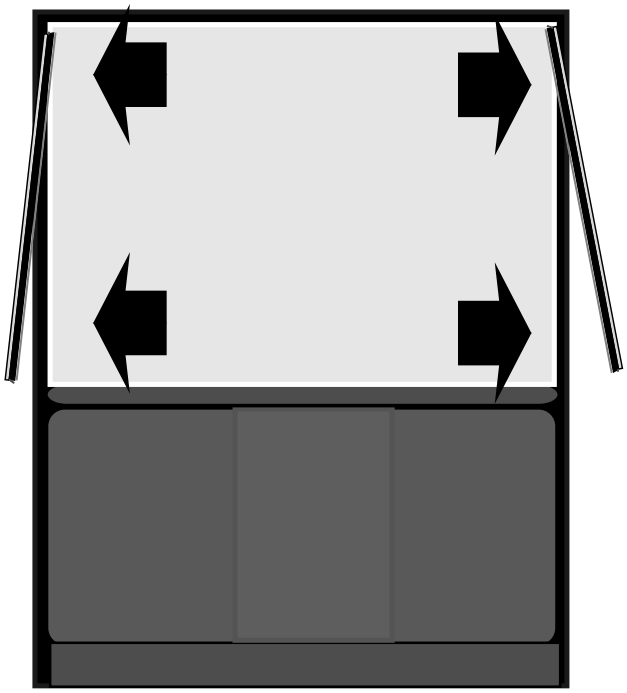
1. Remove the side clips by pressing them out of the opening, starting at a corner. Do not force the clip. The clip will slide out of place.

2. Remove the shield, sliding it out of the channels, starting with the top guide. Gently bow the Diamond Shield™ toward you and push the side of the Diamond Shield™ out of the channel then remove the opposite side.

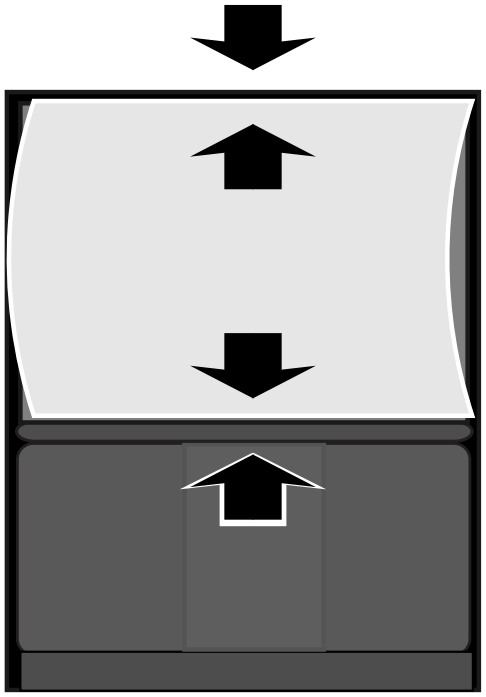
3. Wipe off any dust with a lint-free cloth and store the screen carefully where it will not be scratched. This completes the Diamond Shield™ removal.

4. Re-install the molding clips for a finished look.

To install the Diamond Shield™, reverse the order of the above process.



Step 1. Diamond Shield molding clip removal



Step 2. Diamond Shield removal

WARNING

Sharp edges! Always wear gloves to handle, lift, remove and install Diamond Shield and molding clips.

IMPORTANT

For further assistance, call (800) 332-2119.

Appendix G: Diamond Shield™ Installation for Models WS-55813, WS-65713, WS-65813 and WS-73713

The instructions below will lead you through the Diamond Shield installation process.

Included in the Diamond Shield package are the following items:

For models WS-55813, WS-65713, WS-65813 and WS-73713

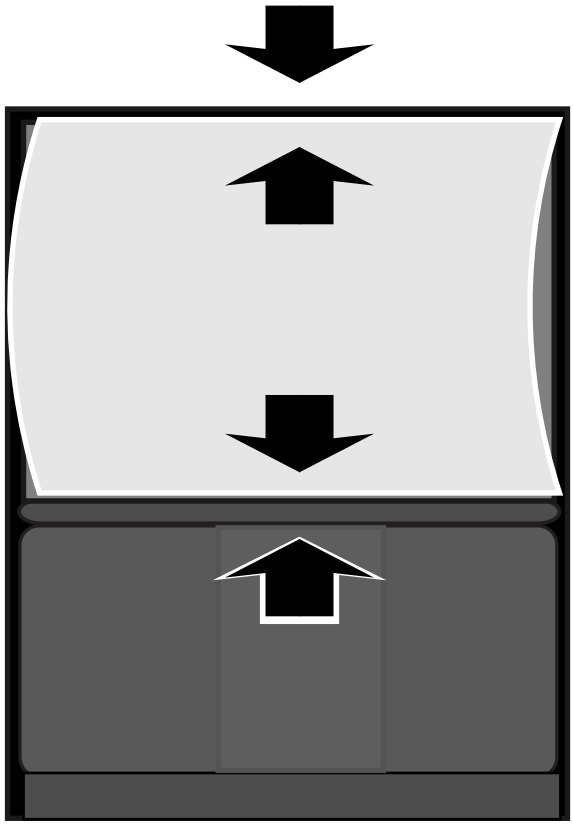
(1) Diamond Shield™

(2) molding clips

1. Carefully remove the Diamond Shield™ from the protective packaging. Wipe off any dust with a lint-free cloth. Do not use any cleaners on the anti-glare Diamond Shield™.

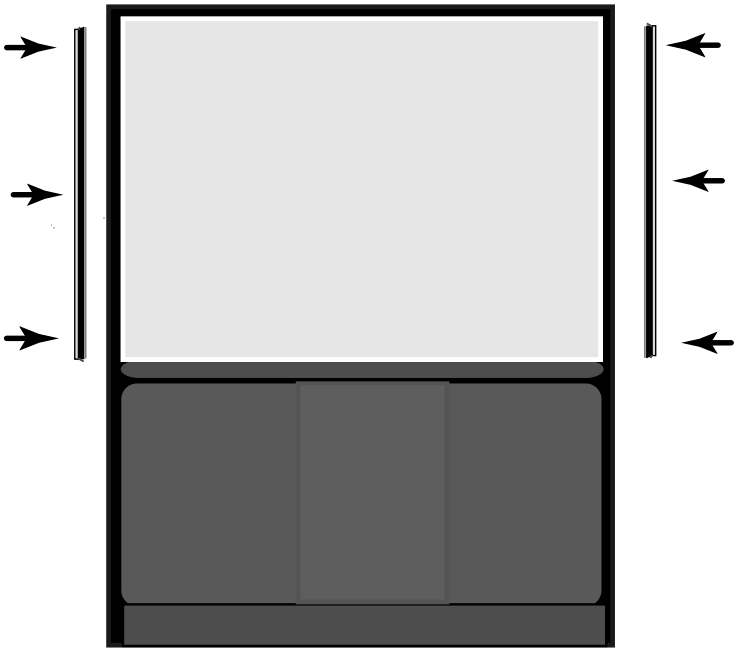
2. Begin by inserting the shield, sliding it into the channels, starting at the bottom. Gently bow the Diamond Shield™ toward you and insert the top of the Diamond Shield™ into the top channel.

3. Install the left and right molding clips by pressing them into the opening, starting at a corner. Do not force the clip. The clip will slide into place. This completes the Diamond Shield™ installation.



Step 1. Diamond Shield installation

To remove the Diamond Shield™, reverse the order of the above process.



Step 2. Diamond Shield molding clip installation

WARNING

Sharp edges! Always wear gloves to handle, lift, install and removeDiamond Shield and molding clips.

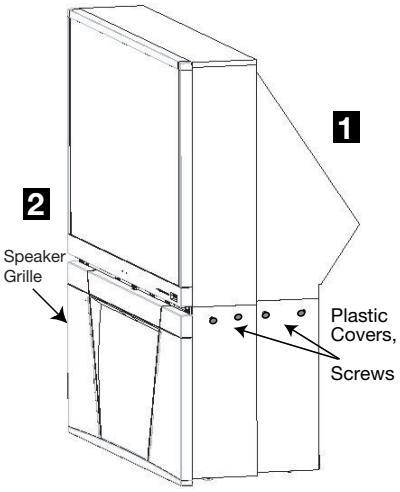
Appendix H: Cabinet Separation for Models
WS-65513, WS-65613

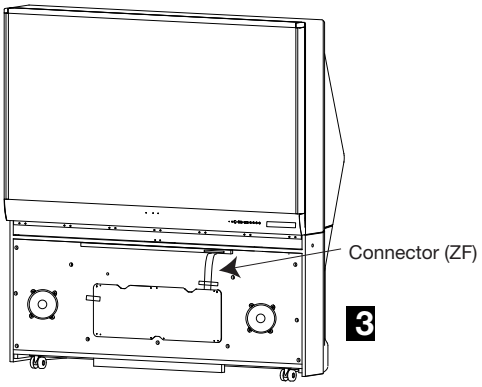
For Mitsubishi Dealers and Service Personnel Only

The cabinets for Mitsubishi projection television models WS-65513 and WS-65613 have been assembled in two pieces.

These pieces may be separated to allow for easier delivery and setup. The instructions below show how to safely separate and reattach the cabinet.

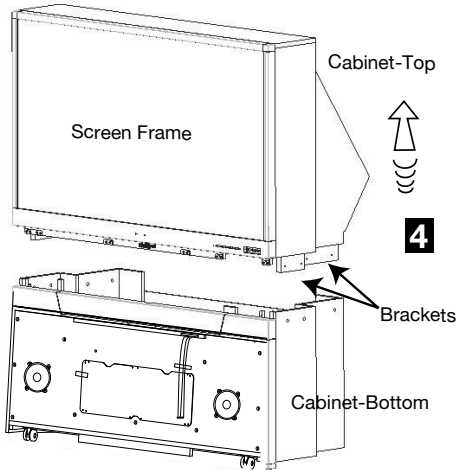
This projection television weighs over 320 pounds and has many sensitive components. Any dismantling procedure should be done by authorized Mitsubishi Dealers or Service Personnel ONLY.

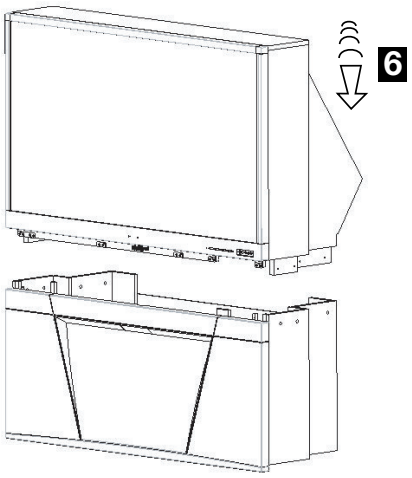




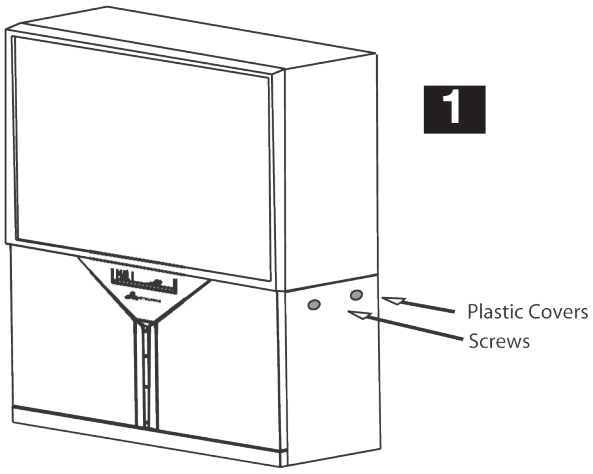
The following operations should be performed by two people:

1. Remove the decorative Plastic Covers (2) on each side of the cabinet and then remove the exposed screws (2) on each side.
2. Remove the Speaker Grille by pulling straight off the cabinet.
3. Disconnect the connector (ZF)
4. Carefully lift the Cabinet-Top straight up until the brackets are clear from the Cabinet-Bottom. DO NOT use the Screen Frame when lifting the Cabinet-Top.
5. Carefully place the Cabinet-Top on to the floor.
6. Once you have moved and positioned the Cabinet-Bottom to its desired location, reverse the procedure and mount the Cabinet-Top on the Cabinet-Bottom. Be sure you align the brackets properly. Keep fingers clear of all joints! Replace the screws and the decorative Plastic Covers that were removed in Step 1.





Appendix H: Cabinet Separation for Model WS-65713, WS-73513, WS-73713



For Mitsubishi Dealers and Service Personnel Only

The Mitsubishi TV models WS-65713, WS-73513 and WS-73713 cabinets are assembled in two pieces. These pieces may be separated to allow for easier delivery and set up. The instructions below show how to safely separate and reattach the cabinet. This TV weighs over 320 lbs and has many sensative components. This dismantling procedure should be done by authorized Mitsubishi Dealers or Service Personnel only.

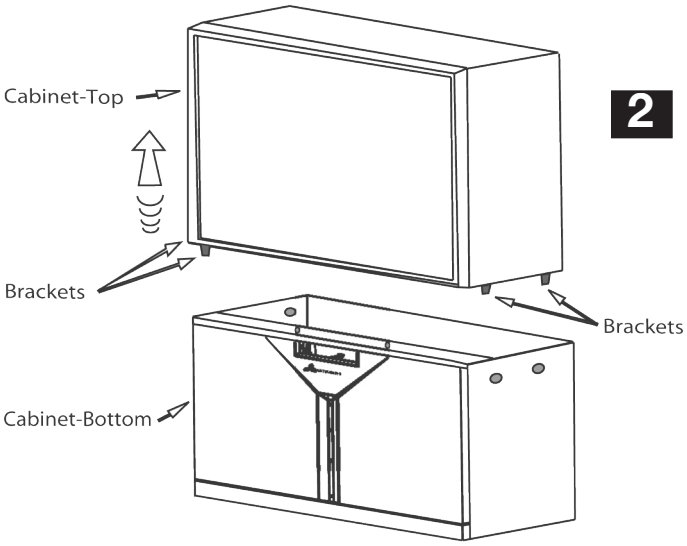
The following steps should be performed by two people:

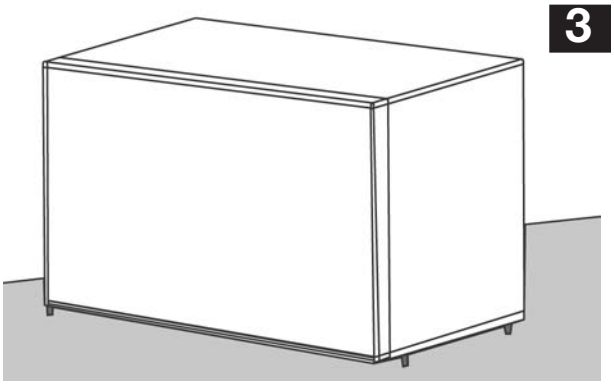
1. Remove the decorative Plastic Covers (2) on each side of the cabinet and then remove the exposed Screws (2) on each side.

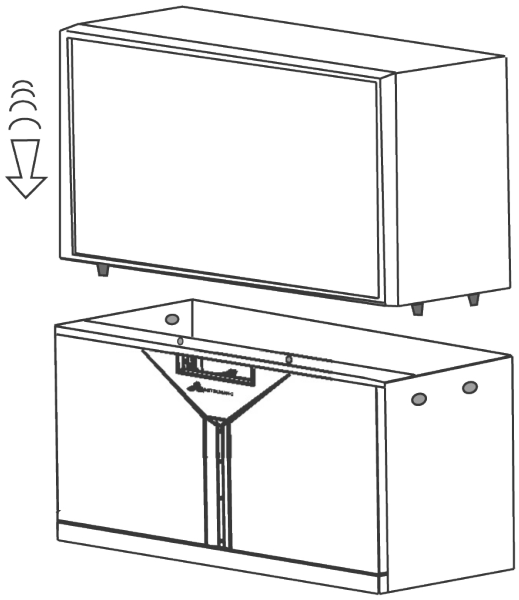
2. Carefully lift the Cabinet-Top straight up until the Brackets are clear from the Cabinet-Bottom.

3. Carefully place the Cabinet-Top on the floor.

4. Once you have moved and positioned the Cabinet-Bottom to its desired location, reverse the procedure and mount the Cabinet-Top on the Cabinet-Bottom. Be sure you align the Brackets properly. Keep fingers clear of all joints! Replace the screws and the decorative Plastic Covers.



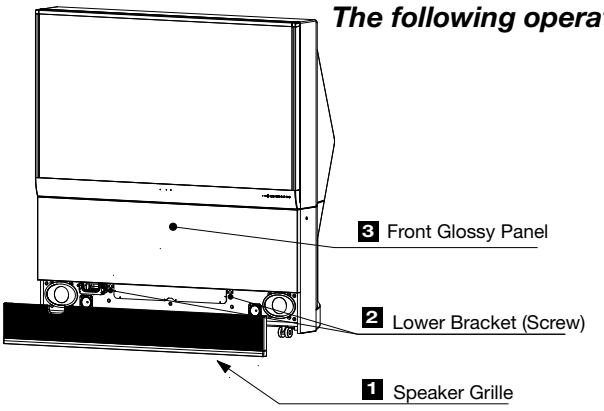




Appendix H: Cabinet Separation for Model WS-65813

For Mitsubishi Dealers and Service Personnel Only

The Mitsubishi TV model WS-65813 projection television cabinet has been assembled in two pieces. These pieces may be separated to allow for easier delivery and setup. The instructions below show how to safely separate and reattach the cabinet.
This projection television weighs over 249 pounds and has many sensitive components. This dismantling procedure should be done by authorized Mitsubishi Dealers or Service Personnel ONLY.



The following operations should be performed by two people:

1. Remove Speaker Grille by pulling forward from left and right sides of TV.

2. Remove Front Glossy Panel screws at lower brackets.

3. Slide Front Glossy Panel to right side approximately 1/2", then pull away from TV.

4. Remove the screws attaching Cabinet-Top and Cabinet-Bottom from the front boards.

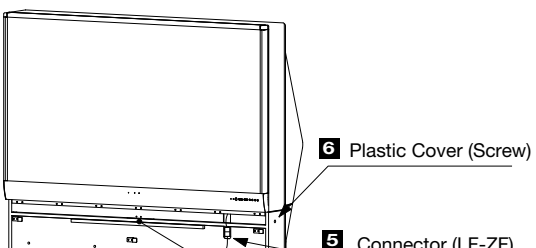
5. Disconnect the connector (LF-ZF).

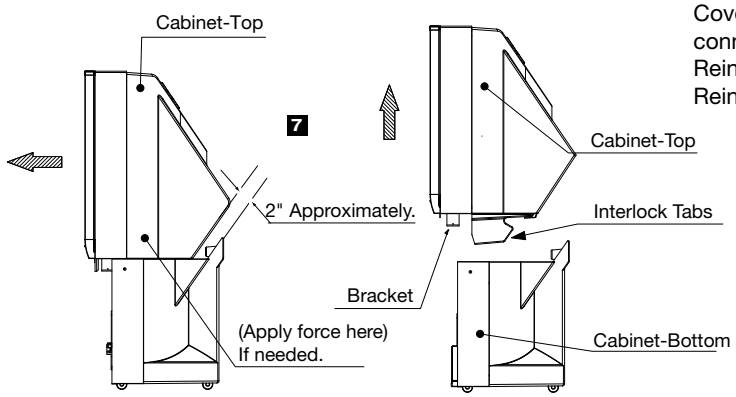
6. Remove the decorative Plastic Cover on each side of the cabinet. Remove the exposed Screw on each side.

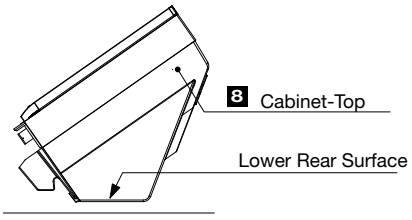
7. Secure the Cabinet-Bottom from moving, then slide forward the Cabinet-Top (may require some added force). Carefully lift the Cabinet-Top straight up until the interlock Tabs are clear from Cabinet-Bottom.

8. Carefully place lower rear surface of Cabinet-Top on floor.

9. Once you have moved and positioned the Cabinet-Bottom to its desired location, reverse the procedure and mount the Cabinet-Top on the Cabinet-Bottom . Be sure to align the Brackets properly. **KEEP FINGERS CLEAR OF ALL JOINTS!** Replace the Screws and decorative Plastic Covers that were removed in step 6. Rejoin the connectors per step 5. Replace the screws per step 4. Reinstall the Glossy Panel and Screws per step 2. Reinstall the Speaker Grille per step 1.







	Problem	Possible Solution
1.	The TV remote control does not work.	• Check that the batteries are installed correctly. • Check that the selected switch is set to “TV”. • Be no further than 20 feet from the TV when using the remote control. • Program the remote control to operate the TV (Appendix C).
2.	The TV takes several seconds to respond.	• It is normal for digital channels to take longer to tune in. • Press ENT(er) after a channel number to avoid delays. • Use the three digit number, i.e 002 for channel 2. • Enter 5 digits for digital channels
3.	You cannot access a channel.	• Use number keys instead of CHANNEL up/down. • Be sure the channel you want to view is in memory. • Check that the TV is turned to the correct device or antenna for that channel, by pressing the DEVICE button. • Make sure the V-Chip lock is off. • If tuned to Ant-DTV, have physical channel in memory.
4.	On-screen displays appear each time you change a function.	• This is part of normal TV operation.
5.	You cannot program the TV to turn on automatically (timer function)	• The TV may be locked. • The clock may not be set.
6.	There is no sound even when the volume is turned up.	• Check audio source in Device Menu. • Check to see if the MUTE button is on. • The TV’s “Listen to:” setting may be set to SAP. • Check that the “TV Speakers” setting is On in the Audio/Video menu.
7.	Correct time is lost	• The unit is set to Low Power mode and has been powered Off for more than 48 hours
8.	The front LED flashes for over a minute when the TV is being powered On.	• The unit is set to Low Power Mode. Set to Standard Power mode for quicker power On.
9.	NetCommand unable to learn specific device keys.	• Device does not use IR format for remote control signal. ITT and RF formats cannot be learned. • Room lighting may affect the signal. Have the remotes very close (6 inches or less) to the TV during Learning. • If using a Mitsubishi remote control make sure slide switch is not set to TV position. • Some but not all device key functions can be learned by NetCommand. For example, POWER and PLAY may be learned, but other functions may not. • The signal from the remote control may not be strong enough. Insert fresh batteries and try Learning again.
10.	You have forgotten your lock passcode.	• See Appendix A, Bypassing the V-Chip Lock.
11.	PIP does not display a picture.	• Make sure the V-Chip lock is off. • Not all inputs can be displayed as a PIP.
12.	The sound does not match the screen picture.	• NetCommand® is setup incorrectly. • The TV’s “Listen to:” setting may be set to SAP. • If using stereo or A/V receiver speakers, check their input selection. • If using stereo or A/V receiver, check that AUDIO 2 of MONITOR OUTPUT on TV’s back panel is connected to the A/V receiver and AUDIO 2 is the setting in NetCommand.
13.	There is a large black or gray rectangle on the screen.	• The TV’s analog closed captioning has been set to “text” mode in the Captions menu. Turn off because there is no text information being broadcast.
14.	You cannot see a picture when playing a VHS tape.	• Display the Device Selection menu and select the correct VCR. • Check your VCRs owner’s guide for further trouble shooting.
15.	V-Chip is not working.	• Make sure that V-Chip is On. • If V-Chip Hours are currently set to disable the V-Chip lock, the V-Chip will not block programming.
16.	The TV will not turn on after being plugged in.	• If green light on front panel is blinking, wait for at least one minute for the light to turn off, then press Power again.
17.	TV functions do not respond to the remote control or to front panel control and will not Power Off.	• Use the System Reset button as explained at the end of this section.

	Problem	Possible Solution
18.	When viewing a stopped VCR, white lines are rolling on the screen.	• Turn off video mute for the VCR. • Begin playing the tape. • Change the VCR input to the antenna input.
19.	TV turned itself Off and the light on the Front Panel started to blink.	• Momentary power fluctuation caused the TV to turn off to prevent damage. Wait for the green light to stop flashing and turn On again. • If the TV does not stay turned On, use the System Reset button. If this happens frequently, obtain an AC line power conditioner/surge protector.
20.	When a Device is selected from the Device Selection menu, the screen is blue (no signal source).	• Make sure the selected device is turned on. • From the Edit NetCommand® menu select Review setting. Verify that the inputs are actually connected to the TV . If they are not, either change the physical connections on the back panel, or select the Change setting on the Edit NetCommand menu to change the TV NetCommand's settings for the connection.
21.	The Device does not respond to button presses from the remote.	• Remote has not been setup for NetCommand® use. • The incorrect manufacturer was selected during setup. Select the Change setting from the Setup menu and then the device to display the manufacturer selection. Change if necessary. • The device is not supported and keys have not been learned. • The requested function is not supported by NetCommand. Verify that the function is supported or keys are learned. • The IR emitter is incorrectly placed. Make sure the IR emitter is facing the IR sensor in the device. • The IR emitter is not plugged into the IR emitter Output NetCommand. • The IR emitter is facing the TV screen, causing double signals. Be sure that the IR emitter cannot send to the TV.
22.	The A/V Receiver is the selected audio source but there is no sound.	• Check to see if the A/V Receiver power is turned on. After the power is turned on, redisplay the Device Selection menu and press ENTer to allow NetCommand to correctly select the A/V Receiver input. • Setting does not match device being used (example: Audio Video 1 was selected, but Audio 2 displays in Monitor Out screen in NetCommand setup). • From the Setup Menu select Review setting. Check the Review screen to see if the A/V Receiver inputs and device correspond to the actual connections on the A/V Receiver. If they do not match, either change the actual connections, or select Change on the Edit NetCommand menu to change the device on the Connection screen.
23.	The TV Speaker icon or A/V Receiver icon is grayed out and not selectable.	• Select the Change setting from the Edit NetCommand menu, and then select the device (for example VCR). Once the Connection screen is displayed, check if the audio checkbox is selected for the TV input and/or AVR input.
24.	Devices are grayed out in the Device Selection menu or the PIP Selection menu.	• A recording is in progress requiring the use of Monitor Out. Cancel the recording to select the device. • Digital devices (Ant-DTV ,1394 devices and Memory cards) cannot display in the PIP or POP.
25.	Cannot see the A/V Receiver menu.	• The A/V Receiver is not connected to any input of the TV. To check the A/V Receiver menu temporarily plug into an unused input of the TV. Then select Review from the Setup Menu, turn the input On to view the A/V Receiver menu.
26.	Screen is black when trying to view Antenna DTV or IEEE 1394 device.	• The PerfectColor™ color balance has been incorrectly set. Use the Advanced menu to reset the color balance.
27.	A program recorded on your TV is distorted when played on a 4:3 TV.	• TV was set to Anamorphic when program was recorded. Record programs in Cropped mode if playing back on a 4:3 TV.
28.	The REC button is not working, or, on the Transport menu the record key is grayed out and not available.	• The device does not support recording, such as a DVD player. • Recordings can not be initiated from the Transport menu when using an IEEE 1394 device. Pres REC instead. The Record menu displays allowing setup of a recording.

	Problem	Possible Solution
29.	Excessive digital artifacts.	• The IEEE 1394 cable is too long (15 feet between devices is the maximum length). • There may be a slow device in the middle of the IEEE 1394 network. Move the slow devices to the end so that connections for faster devices do not pass through them.
30.	Cannot see a picture from a DV Camcorder.	• Go to Device Selection menu and select analog connection. • Connect the DV Camcorder to analog input (for example,Input-3). Select Setup from the main menu, then Change. At the Change screen, select the camcorder. On the Name screen, check Analog Connection. Select the device and on the following screen,select which analog input was used, and check audio and/or video.
31.	DVCR analog/digital problems.	• If the tape is currently playing but no picture displays, you may have a mismatch of the media with the display. Press the DEVICE key to display the Device Selection menu. Press ENT(er) for the DVCR device. From the pop up box, if digital is selected, try analog, or if analog is selected, try digital.
32.	D-VHS recordings for digital cable have drop-outs (loss of picture or sound), or no playback.	• Digital cable signals on IEEE 1394 can exceed the data rate standards supported by D-VHS.
33.	TV is out of focus.	• Focus is out of alignment. Align Convergence.
34.	Red or blue color is “bleeding” or shadowing images.	• Focus is out of alignment. Align Convergence.
35.	There is no audio and video from the IEEE 1394 device.	• The device is not turned on - turn the device power on. • No media (tape or disc) is inserted into the device. • The media is blank (has no recording). • The play command failed - Try pressing play again on the device’s remote control or front panel. • The device is already in use (for example: the device is currently recording). • The source is copy-protected or violates copy protection. • The device’s digital video signal is not supported by the TV, such as DV video, common with camcorders. Use analog connections instead, if available. • The device is not an audio/video device. • Too many other devices are already communicating over IEEE 1394. Remove or stop some devices and try again.
36.	The IEEE 1394 device cannot be selected.	• IEEE 1394 devices and Ant-DTV cannot be displayed in the PIP. • The device may be busy, either recording or a peer-to-peer connection has been established. Cancel the recording or peer-to-peer connection.
37.	The IEEE 1394 Device is not listed in the Device Selection menu.	• The device is unchecked in the Review screen. Select the Setup menu, then select Review setting. Verify the device is checked. • The IEEE 1394 plug is disconnected or loose. • The IEEE 1394 Device has not been powered On. Turn on. • The device has not been discovered. • The device is not an Audio/Video device
38.	DEVICE MENU button does not display a menu.	• The IEEE 1394 device does not provide a menu. • The TV cannot support IEEE 1394 menus. See page 46.
39.	All IEEE 1394 devices disappear.	• When connecting the devices, there must always be a device at the end. The connected devices must not be in a loop that returns to the TV. • Disconnect all the cables and devices from the TV. Replace them one by one to locate the problem device or cable. • Use System Reset (front control panel).
40.	Cannot rediscover a deleted IEEE 1394 device	• The device has been disconnected. Plug it in. • The device is unchecked in the Review screen. Go to Setup in the Main menu, then select Review. Check the device. • Remove IEEE 1394 plug. Go to the Edit NetCommand menu. Delete the IEEE 1394 device. Plug the device in again so it can be discovered again.

	Problem	Possible Solution
41.	An IEEE 1394 device has been plugged in but does not appear in the Device Selection menu (not discovered).	• The IEEE 1394 connection to the TV or another device is not secure or is loose. • The IEEE 1394 device is not powered on. • A device in the IEEE 1394 chain is not powered on - turn on all the devices. • The device discovery can take as long as a minute to initiate. • IEEE 1394 cable is too long (maximum of 15 feet between devices). • The IEEE 1394 device uses an incompatible protocol and will not be discovered
42.	Cannot record to or from the IEEE 1394 device, including Dub recordings.	• To initiate a recording to IEEE 1394 device press the REC key. The Record menu displays allowing setup of the recording. • The source device for the recording is not powered on. • When dubbing, the destination device for the recording is not powered on. • The wrong media, (analog tape for digital recording, or digital tape for the analog recording) is in the device. • Either the program is copy protected, or if there are multiple subchannels and one of the programs (not necessarily the program requested) is copy protected. • The program has already been recorded once and the copy protection only allows one recording. • Unapproved source device for copy protected material. • The recording device can not decode the copyright signal included in the signal source (try another device if available). • The playing device (for dubbing) does not support copyrighted material. • Source for recording is copyrighted. • Too many IEEE 1394 devices in network. Insufficient bandwith available. Disconnect unused devices. • Source Device has higher speed (S 400) than record device. If possible, reverse devices, play in the slower device and record in the faster device.
43.	Cannot control the IEEE 1394 device from the Transport Menu.	• Device may not support the command. • Selected function is gray (such as Record for a DVD, which does not support the Record function).
44.	TV is not responding, after pulling out a Memory card during playback.	• Press STOP or wait until playback is complete before removing Memory card.
45.	TV can't play or stop a Memory Card.	• NetCommand was not setup. You can only use ENTER and CANCEL on the TV remote to control the Memory cards.
46.	Can't see a thumbnail picture in the Jpeg menu, or can't see a track/song name in the Playlist menu.	• File does not meet file standards for playback.
47.	TV is unable to detect that a Memory Card has been inserted.	• The memory card was reformatted to a smaller block size. Reformat the card to a file format of FAT 16 with a block size of 1024 or 2048.

Using The System Reset Button

If the TV doesn't respond to either the remote control or the front panel controls or will not power off, press the SYSTEM RESET button on the front panel with a pointed item such as the point of a ball point pen or end tip of a paperclip.

The TV will turn off and the green led will flash quickly for about one minute. When the green led stops flashing, you may turn on the TV again. The changes you made while the TV was most recently on, before you used the SYSTEM RESET button may lost, however, the changes you made previously are not lost. Only those changes since the last power On may be lost when the system reset button is pressed. All other settings are retained.

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Demo Mode

This TV has a demo mode for use in a retail store.

To turn On/Off, press the following buttons in sequence:

MENU, 0, QV, 0

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Connection: Helpful Hints

Q My VCR (or other device) does not have two sets of stereo audio outputs; how can I connect this device's audio to both the TV and the A/V Receiver?

A. There are two solutions:

1. Connect the single set of stereo audio outputs to the TV only. Use the Edit NetCommand® feature to "Change" the setup of this device. In the Connection screen part of "Change" make sure both audio and video for the TV input are check marked and neither the audio or the video for the AVR input are check marked. This will allow the NetCommand system to use the TV outputs to transfer the device's audio to the A/V Receiver. See Edit NetCommand Setup.

2. Use RCA type "Y" splitter cables to split the device's audio output to be connected to both the TV and the A/V Receiver.

Q. I have both the TV monitor stereo audio output and TV digital audio output connected to the same input designation on my A/V Receiver, how do I switch between analog audio and digital audio?

A. This depends on the individual A/V Receiver. Some A/V Receivers will switch automatically to digital when a digital audio signal is supplied so you do not need to do anything. "Other" A/V Receivers can be manually switched by remote control, for these types of A/V Receivers, see the NetCommand Guide Appendix for NetCommand control of this features. Some A/V Receivers will require that you make this change on the front panel of the A/V Receiver.

Q. The front panel of my A/V Receiver is too tall or too convex for the IR emitter signal to reach the remote control sensor of the A/V Receiver. What can I do?

A. There are several possible solutions.

1. Mount the IR Emitter on the top, front edge of the A/V Receiver over the remote control sensor. Use tape to secure it in place.

2. Mount the IR Emitter on the underside of the self above the A/V Receiver (if the A/V Receiver is in a cabinet). Use double sided tape to secure it in place.

3. Some small stick-on emitters from other manufacturers may be compatible with the IR Emitter – Home Theater jacks, these may be used instead of the supplied IR Emitters.

Q. I occasionally need to see the menu from my A/V Receiver, how can I connect it to the TV for this purpose?

A. You can connect the video output of the A/V Receiver to an unused input on the TV. Then use the Edit NetCommand to "Add" this as an ""Other"" device, not an A/V Receiver. On the "Connection", screen indicate which TV input was used and check mark the video box. Make sure the TV input audio box and both the audio and video boxes for the AVR input are not check marked. You should also name this device so you can easily identify it on the Device Selection Menu. Or use Input 3 (Camcorder) on the front panel.

Q. I have a high definition receiver I would like to connect and it also has an S-video output I would like to be able use as well. Is there are way to connect this receiver both ways?

A. Yes, this item will appear twice in the Device Selection Menu. Just add this unit twice, once using the Inp-DTV and once using one of the S-video inputs. Make sure you indicate that this is the same manufacturer for both. We suggest that you connect stereo audio outputs with the S-video to the TV so that you do not need to use two inputs on the A/V Receiver. If this is a NetCommand compatible HDTV receiver that HD or SD outputs can be switched by remote control, see the NetCommand Guide Appendix for NetCommand control of this feature.

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If you have questions regarding your television, call Consumer Relations at (800) 332-2119, or email us at MDEAservice@bigscreen.mea.com

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